

TRANSCRIPTS



FASTING
Transformation
summit



HOSTED BY DR. DAVID JOCKERS



FASTING

Transformation

summit

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12 Research-Based Benefits of Fasting

Guest: Dr. David Jockers

Dr. Gez Agolli: Welcome to the Transformational Fasting Summit, uncovering the most ancient, inexpensive, powerful tool known to mankind, fasting. Hi, I'm your host, Dr. Gez Agolli. Join with me' it's an exciting time.

I'm going to be interviewing Dr. David Jockers, who is an expert not only in keto, not only in fasting, but a visionary in natural health care. The founder of Exodus Clinic here in greater Atlanta, Georgia. Very good friend of mine. He's done an amazing job developing products online. Educating. He is truly the innovator and educator of the 21st century in natural health care. David, thank you so much for joining me today. What a pleasure.

And as we're going through this entire fasting summit, what really excites me as a practitioner, and being in healthcare for over 25 years, such a simple tool. Fasting. Is that even possible?

Dr. David Jockers: I believe—and I tell people this all the time—it's the most ancient, inexpensive, and powerful healing strategy you can do. You don't need any money.

Dr. Gez Agolli: It's amazing how inexpensive it is. But let's get really down to the nitty gritty here. Because I think it's important that we educate those that are joining us for the Transformational Fasting Summit. What exactly is fasting, and what options are there in the fasting world for our viewers?

Dr. David Jockers: For sure. So basically, to define fasting, it's just going without food. It's just restricting yourself without food. Now, when it comes into the fasting world, it's like, how long do we go without food? So what researchers actually say is that going, in a sense, for a period of time 12 hours or beyond. Especially if we get through a full day.

They actually say it's when you get 25% or less of the calories that your body needs. So 25% or less. When it's a 50-75% less calorie load, that's more of what we call a calorie restricted diet, but not technically fasting. So, 25% or less of our calorie needs would roughly be about 400-600.

Dr. Gez Agolli: That is a key number, 25%, right? So let's get into the numbers then. What would that mean for the lay-person.

Dr. David Jockers: Yeah, it's going to be like 400 to 600 calories in a day. Now, as we get into the fasting world, there are a lot of people that are really strong proponents of water only fasting. And that has incredible benefits, too. In fact, I think it has the highest level of benefits.

But it's not necessarily for everybody. There are lots of different fasting options that people can do. For example, bone broth fasting, which is incredible for the gut. You provide all this collagen, amino acids, you provide electrolytes, all kinds of stuff. Really using bone broth or something like that can really help somebody get through a fast. And they're going to consume some calories.

Dr. Gez Agolli: And bone broth has definitely been heavily researched, as we know. It has lots of nutrients, as well. And you and I are both big believers of that. But it's really interesting, as we're talking about the different types of fasts and the options out there, there's a lot of different practitioners all over the place. And one size doesn't fit all.

So let's get right into the different types of options out there for fasting. Because I think that's one of the key areas that there's confusion on. What are the different options?

Dr. David Jockers: First what I want to do is kind of really break down fasting into a daily schedule. Like a fasting lifestyle into a daily schedule. And into, let's say, a weekly schedule.

There's something called time-restricted feedings. We've heard this term, intermittent fasting. And really, all fasting is intermittent, because we eat before we start the fast, we eat after the fast. But when we talk about it in a one to two-day period, we call that time-restricted feeding.

Extended fasting is after 48 hours. So once we kind of go through a 48-hour period with less than 25% of our calorie needs, then we move into this extended fasting area. So that's when we hit the extended fast.

So within that 48-hour period, there's a whole bunch of different options for time restricted or intermittent fasting. So we could do things, for example, I always tell people the best way to start fasting is a 12-hour simple fast. And I call it the simple fast, because it really is simple. You finish dinner at 6 p.m., you don't eat anything with calories until 6 a.m. the next morning. It's pretty simple to do.

Dr. Gez Agolli: Very simple. I like that.

Dr. David Jockers: Yeah, exactly. In fact, I've got twin 3-year-olds, and we finish our dinner at 6 p.m. every night, and basically they're not eating until usually 8:30 the next morning. They're just sleeping overnight. So it's really something all of us can do.

Now, beyond that, once we start pushing it out to 14 hours, I call that the brunch fast. Because it's kind of like pushing out your breakfast, or eating dinner a little earlier.

Dr. Gez Agolli: Just an extra 2 hours. So we call it the brunch fast.

Dr. David Jockers: An extra 2 hours. Once we get into 16 hours, I call that the strong fast. This kind of 16 to 18-hour window. There are a lot of people who talk about that 16/8. And when we're looking at eating versus fasting, I call the eating window, which is the time between our first meal and our last meal. That's called the building window. It's eating, feeding, or building window.

It's characterized by hormones like insulin, which basically help our body store and build. So if we eat at, say 10 a.m. and we finish eating at 6 p.m., that's an 8-hour building window. Now, the time between our last meal, in this example, it's 6 p.m. And then our first meal the next day, which would be 10 a.m. the next day, that's a 16-hour window. I call that the cleansing or fasting window.

Because when we fast, it helps our body cleanse. It helps our body to regenerate new, healthy cells. And we'll talk about all those benefits. So 16/8 would be basically a 16-hour cleansing window and an 8-hour building window.

Dr. Gez Agolli: So we look at that 16/8, which there are many practitioners who know the benefits behind that. But the beautiful thing about the 16/8 is once you work way into it, as you were saying. 12, 14. 12 is simple, 14 is the brunch fast. And 16 is the power where you really get into that intracellular cleansing. Also there requires some discipline there. As we're getting to longer fasts. Which we talked about 24 hours, even 48, and longer even water fasts.

Getting to that 16/8 window, there's been some research behind that, as

well. What have you found with your patients and clients, getting to the 16? Is it a difficult task for consistency?

Dr. David Jockers: It's really not difficult. I always tell people, fasting is like exercise. The first time you go out. If you're sedentary, and you are de-trained. I know you just came off a foot injury, right? So the first time you exercise, as you are coming off an injury like that, you're going to be sore the next day. It's going to be uncomfortable because your body is detrained. As opposed to, once you start training on a regular basis, you develop a level of fitness that makes training more enjoyable and comfortable.

Dr. Gez Agolli: That's a great example. Actually, it's perfect because I'm coming off a 14-week injury, and I've not worked out. And it's really interesting, to get in really great shape takes a long period of time. And to lose getting in shape is very quick.

Dr. David Jockers: Yeah, exactly.

Dr. Gez Agolli: The nice thing about that, I managed to maintain my weight and my fitness by intermittent fasting. So everything you're talking about, I've had the personal benefit. So I'm a big believer in it.

No two individuals are created equal, so there are many different areas. And that's why I like the way you're breaking this down. The simple, the brunch, and going right into the 16.

Dr. David Jockers: Yeah, exactly. And I'll keep going with that. But basically, you've got to strengthen your fasting muscle. The first time you try, let's say you're used to doing a 12-hour fast. And you want to push it up to 14. Expect yourself to be a little bit uncomfortable. That's ok. The good thing is this, you're normally going to get a hunger wave. And that's actually a normal physiological process. There's a hormone that gets secreted from our stomach called ghrelin. And it gets secreted when our stomach is empty, number one. And number two, it gets secreted, it's a condition response. That means, if we're used to eating breakfast at 8 a.m., we should expect to feel hunger at 8 a.m. That's because of this hormone, ghrelin.

Now, what we can do to suppress it is basically drink water. I tell people, drink 8 to 16 ounces of water, wait about 5 minutes, and see if you're still hungry. You drink that water. Your stomach expands. The ghrelin secretion stops, and you get kind of this hormone optimization that starts to take place.

And typically, you don't even feel hungry. Right? You actually feel well satiated.

Dr. Gez Agolli: Ghrelin is such an important hormone, because it's sending a message to the hypothalamus and satiety. So I agree with you. In the research that I've done, through my studies, that the lowest amount of ghrelin is in the morning. So we're conditioned to eat as much as we can. And of course, there are many times you can fast. You can not eat all day, and have your first meal, 5 or 6. Different windows.

The point I'm trying to make is the highest amount of ghrelin is probably 8 p.m. at night, which is where you see some of those people. So you're right. It's based on education. Great strategy with the water. Obviously, you and I both believe in having filtered water with good minerals, of course. As we're seeing a lot of problems with the environmental contaminants and these endocrine disruptors that we're seeing from chemicals, of course.

From your viewpoint, and your research, can we add something to the water? Such as lemon?

Dr. David Jockers: Absolutely. You certainly can. I always tell people, they ask me what type of fast should I do? Should I do a water only fast? Should I do water and salt fast?

I typically recommend a water and salt fast. However, you can do things like lemon or lime. Which have very little calories. They also provide vitamin C, bioflavonoids, which actually help increase oxygen permeability into the cells. Improves the capillary permeability. Get more oxygen releasing.

You can even flavor it up. There's stevia drops that you can put in that don't have any calories and you're going to get a great impact with that. A lot of people find that they can drink more water. They can stomach more water when it's a little bit sweet. So that really helps.

Dr. Gez Agolli: I think it's important, I'm so glad you're saying that, Dr. David. Because a lot of our viewers today could be very health conscious. Or if you're not health conscious, that's ok. We know that everybody's taste buds are different.

And before we started filming this, Dr. Jockers and I were talking about his son who basically has been on a restrictive diet, and his taste buds have changed. So I want to really get into the taste buds for just a moment here. Because this is a big, big part of exercise that fasting muscle, as we call it. Because we are dictated by our taste buds.

A lot of times, individuals will say, well, I need to have something sweet. How can I have just plain water? That's why a lot of individuals don't drink water. So how long does it typically take for those taste buds to really become educated?

Dr. David Jockers: Yeah, it can take 2-4 weeks sometimes. And the goal is to just get started. Honestly, the more that you start drinking water at times where you would normally feel hungry if you're trying to fast, you start to develop a natural desire for water.

In our hypothalamus, which is basically the big antenna of the body. It's trying to adapt us to the needs of the environment. The hunger center and the thirst center are right next to each other. Whenever we go for food, the act of eating itself stimulates dopamine. Dopamine is the same neurotransmitter that we secrete. In a sense, we create an addiction for any sort of narcotic, any sort of addictive activity.

So eating naturally stimulates an addiction. And that's actually a good thing, because we need to eat to live. And we want to feel good, and it's pleasurable to eat.

Dr. Gez Agolli: Absolutely. Dopamine is one of those neurotransmitters, feel-good neurotransmitters. And you can get into the area where there could be some deficiencies in the body. And it does take discipline and patience, as Dr. David just said, 2-4 weeks.

When you take a look at all the health benefits, we're going to get into our next topic on some of the amazing health benefits from fasting. But we also have to talk about some of these neurotransmitters. And I think it's important for our viewers to understand that there's a lot of different activities going on through the body. A lot of communication going. And it's so important to understand how the hunger with the ghrelin and how we can curtail that just by having the water, as you mentioned.

Any other strategies?

Dr. David Jockers: Yeah, just going back to what I was saying. We secrete this dopamine, which creates kind of this addiction to eating. In the hypothalamus, our hunger center and our thirst center are right next to each other. So oftentimes, we actually part of the nervous system that controls thirst gets blunted, and we actually get neurogenesis of the hunger center moving into that area. So we're really thirsty, but we're experiencing it as, "I'm hungry."

So our body is dehydrated, it's crying out for water. But we think, "I want to eat something. I want to eat some potato chips. I want to eat bread." Maybe we're a healthy eater. "I want to eat fruits or vegetables." Or something like that. We really need the water, and often times we need the electrolytes.

We're bioelectric beings, meaning that we can conduct incredible amounts of energy. In fact, I tell people all the time. We don't eat for energy. We eat for adaptation and recovery. You drink and you take in

electrolytes for energy. Our nervous system is what creates the energy. So basically all we need is water and electrolytes in order to do that.

So as we transition into talking about fasting strategies, again we can do a daily fasting strategy where it's like a 16/8, or an 18/6, or maybe even a 20/4 where we eat our food in a 4-hour eating window.

And there's also, a lot of people do something called OMAD, one meal a day, where it's just consuming one meal a day. And typically I tell people, if you're doing that, it's probably best to do it around the same time of day each day because that's when you're naturally going to get the hunger.

Dr. Gez Agolli: Keep it consistent.

Dr. David Jockers: Yeah, and it's easier, right? It's easier to be more compliant because your body is naturally going to have this big hunger wave at that particular time. So consuming your meal during that period of time is great.

A lot of people think, how can I possibly get the amount of calories I need in one meal? Well, what's cool is, when we fast, we create what's called metabolic flexibility, where it's this ability to meet all of our metabolic needs and to be able to shift between burning sugar for fuel and burning fat for fuel. And we create this energy efficiency. Where we're really efficient with how we use our energy.

So, normally I tell people, when you're fasting. When you do eat in your eating window, whatever it is. A 16/8 if you're eating in 8 hours. If you're only eating one meal a day. Eat until you are fully satiated. You should really feel full and well satiated. Not to the point of bloating, and you've got to throw up. That's not healthy for anybody. But you should feel really satiated. You should not feel hungry after that.

Dr. Gez Agolli: That's a great point. And that's what's so exciting about the Fasting Transformational Summit, is that if you're joining us and you're listening to the expert, Dr. David Jockers, and now it's starting to pique your interest, most anybody can do fasting and benefit from. So we're going to talk about how fasting works to improve your health.

But before I ask Dr. Jockers that question, I want to get back to what you said, which is powerful. We are electrical beings, and that we need that conduction. The goal here is, how do we create energy? There're many ways to create energy, and it goes back to biochemistry that I learned in medical school. Talking about gluconeogenesis.

We can create all this energy when you give the body the right fuel. But the key, as Dr. David said, are these electrolytes and minerals. We're

made with over two-thirds of water, H₂O. And we need to understand that we need that electrical conduction through trace minerals, which about 4% of our body is minerals. Minerals are the spark plugs of life.

So I want to get back into the water, and how we have to hydrate. Great strategy. I know everybody talks about, drink water, drink water, drink water. But how do you really do that? And one of the key areas is that we've heard in our society, by the medical community especially, a lot of the American Heart Association and you've heard all other medical organizations talk about salt is bad, they're demonizing salt.

Now, you and I know that sodium is critically important. Now, too much of the wrong sodium is not good. Because it's affecting the sodium/potassium balance. And we know there's a balance there. But I want to stay on this focus with hydration, and what do we put in there when it comes to the electrolytes?

Dr. David Jockers: Just in general, just really good, clean water. I would say that's where you want to start. Now, electrolytes can be helpful. A lot of people, when they start fasting, especially if they're trying to do an extended fast or fast beyond their comfort zone. They can start to feel dizzy. They can sometimes have nausea, or headaches.

This is, again, it's all normal. It's ok. It's ok to feel uncomfortable. A little bit of electrolytes, like taking some pink Himalayan salt, or Redmond's real salt, or a good quality salt. Putting it on your tongue, just a little bit, and then drinking some water can help reset the system. And a lot of people will notice immediately that they feel a lot better when they do that.

So we don't need a whole lot. It's not like we need to take spoonfuls.

Dr. Gez Agolli: Just a pinch. Just a pinch.

Dr. David Jockers: Just a pinch.

Dr. Gez Agolli: Just like Dr. David said. We're not talking about salt that you're getting that is inorganic, devitalized that is actually we're talking about Himalayan, good sea salt. There are some good salts from Utah, the Red salt. Just a pinch in there. Makes a huge difference. Because there are an abundance of trace minerals that we're getting from good, healthy soil. Which is important to understand.

So Dr. David, I want to get right back into, how does fasting work? Really work to improve the health. And I'm talking at the physiological and the cellular level.

Dr. David Jockers: Exactly. Basically our body, it's kind of like in our

house. We've got to be able to take out the trash. We can't just put stuff in the trashcan and allow it to accumulate. At my hose, I've got three little kids, all in diapers. So those diaper pails, they fill up quickly. And if I didn't take the trash out...

Dr. Gez Agolli: I remember those days. I'm really, really glad that you're experiencing this.

Dr. David Jockers: I literally take the trash out every single day. And if I'm out of town for a few days, my wife, our nanny, they don't always take out the trash. And I come back, and it's building up in there, and it stinks.

Dr. Gez Agolli: Accumulating.

Dr. David Jockers: Exactly. So that's pretty much what happens. When we fast, it's like basically we start to take out cellular trash. Cellular debris. We actually can use a lot of the cellular debris to rebuild new, healthy cells. So it actually stimulates these genetic healing mechanisms. It helps reset and optimize our hormones. And hormones are critical messengers that govern how the body is working. And it's just a really, really powerful thing. We create more efficiency with our energy.

The first law of thermodynamics talks about energy efficiency. And so when we have all this energy that's going into digestion, most people don't realize this. When we digest food, it is extremely energy demanding to be able to digest the food that we're eating. So when we free that up, it allows us to have all this extra energy to heal.

Think about it from a business perspective. It's like, if you make \$1000 this week, but your overhead is \$950, you made a \$50 net profit. So if you're able to still make the same \$1000, but drop your overhead by 80% or something, let's say we drop the overhead to \$200. Now we've got an \$800 profit right there.

That's really what fasting does. It drops our energy overhead, which allows us to have this surplus of energy that we can then use for all these other things like healing and repairing cells. We've got all these different cells that just throughout from stress, and our environment, and our exposure to different things, the air we breathe, the water we drink, the food that we eat. They're going to get damaged. We're going to have DNA damage. We're going to have mitochondrial damage. We're going to have cell membrane damage.

So when our body has the energy freed up to go in and start to repair that, it gives us, in a sense, a whole fresh new start. So it's like we all enjoy the feeling after we get out of a shower. Because we've cleaned off the dirt and the dander from the day. It's kind of the same thing. When

we're fasting, we're showering our cells. We're actually showering off all this metabolic damage, and rebuilding new healthy stronger cells.

Dr. Gez Agolli: So a great way to look at that, as you're explaining this. One of the benefits of fasting is that we're resting our digestive system, which takes a tremendous amount of energy. A lot of things are happening when you digest. You're releasing hydrochloric acid. You're releasing all of these great enzymes, amylase, protease, lipase. And there's just so many different enzymes. Enzymes are catalysts, so we need these enzymes. And we're resting that.

And just a great, great analogy you used there to rest and replenish. And the body has an intrinsic mechanism that we call apoptosis that we're cleaning up that cellular debris. The body is getting rid of it as morbid matter. And what happens is we don't have that opportunity, chronic disease sets in. So this is why this is a great strategy.

This is not a great strategy only to lose weight, which we know and we'll talk a little bit about that because of the hormone insulin. These receptors. But it's a strategy that if you start to use regularly your cells are going to be healthier, they're going to communicate better. Because we have trillions of cells.

Actually, some scientists are recording 100 trillion cells. So we're just a bunch of cells, David. You and I are having a cellular talk right now. And this is what I love about the way you teach. You're breaking it down to simplicity.

What other areas of health have you seen benefit in fasting? Besides at the cell.

Dr. David Jockers: Well, obviously it all starts with the cell. But if we're talking about benefits, the first benefit I like to start with is it enhances fat burning. So when people think about fat burning, they naturally think about weight loss. And if you are looking to lose weight, fasting is one of the best strategies. Applying different fasting strategies.

A lot of times, my patients that want to lose weight. I'll transition them, or we'll work gradually up to this. But I like to get them doing something like an alternative day fasting strategy, where they're consuming food every other day. They find that they feel really good, doing almost a 24-hour fast each day. There are a lot of people that have lost over 100 pounds and been able to keep it off, doing things like a one meal a day strategy.

So fat burning is key. Now, I'm somebody here, sitting in front of you, where I've never once in my life ever wanted to lose weight. My whole entire life, including now, I would love to add additional 5 to 10 pounds

of muscle. So if I want to add 5 to 10 pounds of muscle, if that's one of my health goals, why would I be leading this whole summit on fasting and be practicing this on a regular basis?

Dr. Gez Agolli: It sounds counterintuitive.

Dr. David Jockers: It sounds counterintuitive.

Dr. Gez Agolli: But let's get into the science.

Dr. David Jockers: So here's the cool thing, when my body becomes a fat burner, it actually helps stimulate certain anabolic pathways that preserve lean body tissue. And we'll talk about human growth hormone, for example. This hormone comes out when we're fasting, and it actually tells the body, preserve lean body tissue. I want to preserve my muscle mass.

If you think about it from an ancestral standpoint, our ancestors didn't have refrigerators and pantries. So they had to go out and hunt or forage for food. And there were times where they didn't, for whatever reason, the harvest didn't come up that year. They were in a time of famine. They didn't hunt successfully for days at a time. Sometimes even weeks at a time. If they got weaker during that period of time, they would die off.

So we have this natural adaptation that took place where the body preserved lean body tissue. It became more efficient with its energy. It got better at taking body fat and using it for energy. And body fat, really, our own body fat and the fat that we consume when we do eat, is amazing fuel.

When we basically are using fat for fuel, we produce this incredible bioenergetic molecule called ketones. And ketones basically produce 14 to 18 times more energy than a molecule of glucose, which is sugar.

Dr. Gez Agolli: It's just a more efficient way.

Dr. David Jockers: Much more efficient. Less metabolic waste. So basically, we want our body to be fat adapted. We want our body to be very good at using fat for fuel and fasting really can help us with that.

Dr. Gez Agolli: I like the way that we're talking, and you're discussing this adaptation. Once again, one size doesn't fit all. There are so many different programs you're going to benefit from. But the human body adapts to certain austere environments. And survive. This is how we've survived all these years, and how God has created us in such a unique way that the body can heal itself at the cellular level and take energy.

And what's happened in our society, especially in the United States. I know this summit is going to reach worldwide, which is fantastic. But I want to stick in the United States, that obesity is an epidemic right now. And you mentioned about this 24-hour alternative days of fasting, which is a great strategy. And I just want to throw in there, use the word human growth hormone.

And human growth hormone is the master hormone from the pituitary. It's almost like, I use the example, it's a conductor of a symphony. If you've ever been to a symphony, and you've got this conductor, and you're watching him or her behind the scenes. Without that conductor, you don't have a symphony anymore. And this is what's amazing about the pituitary releasing growth hormone.

Research has shown, within a 24-hour period, that human growth hormone production increases 3, 4, even 500% of what the body is capable. We're not talking about getting it from an exogenous source, whether it's injection or using amino acids. Which I'm ok with using amino acids arginine and lysine and ornithine.

But the body itself actually releases this human growth hormone, not only developing more lean muscle tissue, getting stronger. And that's where the fasting comes in, which is exactly what you're talking about. Building that lean muscle tissue. That's exciting at a scientific physiological level.

And that's why we believe, both myself and Dr. Jockers. That fasting is a great strategy for losing weight. Not because you're not eating. It's because what's happening behind the scenes at the cellular level. Because a lot of physicians out there are saying, yeah, if you stop eating. But once you go back to eating normal again, you're going to gain more weight.

We're not saying to go back, and we can argue about what's normal. Eating donuts and Twinkies and bagels is not normal. What we're talking about is really a lifestyle. This is not a fad. If you're joining us for the Transformational Fasting Summit, this is not a fad. This is a lifestyle.

And you know, Dr. Jockers, I want to get back into the question we're discussing here. Improving our health with fasting. What other areas have you seen in your research how we're going to improve our health?

Dr. David Jockers: Yeah. So we talked about fat burning. So that's the first thing I start with. Number two is energy levels, right? I talked about how we start producing these ketones, and they produce more energy. So we get more energy efficient. Which means that we just feel more energetic throughout the day.

In fact, when you're fasting, you get a rise in norepinephrine. Which is an excitatory neurotransmitter or a stress hormone that helps you with better mental acuity, better memory, better cognitive function. So sometimes it gets a bad rap, because you're like, well, you don't want to over-release these stress hormones. When you're fasting, particularly when you're adapted to fasting, you secrete the right amount at the right time. You just feel mentally sharp. You feel energetic. So you just become more efficient overall from an energy perspective.

It's like, when you're eating all the time, it's like you're getting 15 miles per gallon. It's like you've got a vehicle that gets very low gas mileage. It's constantly needing to be filled up. And it's producing a lot of carbon emissions, on a cellular level, we call the carbon emissions metabolic waste.

When we are fasting, we're living a fasting lifestyle. Because it's not like we're fasting all the time. We're going to eat, and we're going to eat well. In fact, I don't recommend intentionally restricting calories. Thinking, well, if I need 1500 calories, I'm only going to eat 800. I don't actually recommend that necessarily. At least not for a long period of time.

I recommend when you do eat, eat till you're satiated. So we're eating less often. That's the key here with fasting and intermittent fasting strategies. We're still trying to eat a really good amount of calories.

Dr. Gez Agolli: We're just picking that window.

Dr. David Jockers: We're just picking that window.

Dr. Gez Agolli: If you're on a 1500 calorie diet, we're basically saying, is what I'm hearing, is if it's an 8-hour window, it's 8 hours. If it's a 4-hour window, 4 hours. That's when you have it.

Dr. David Jockers: That's right.

Dr. Gez Agolli: And you eat until you're satiated.

Dr. David Jockers: Exactly. And that's super key. What that's going to do, it's basically going to train your body, using the vehicle example, to be in a sense almost like an electrical car. But, also at the same time, get incredible performance. So you're going to be able to switch between burning sugar and burning fat.

So you're going to have that hybrid model. You might get 40-50 miles per gallon. But also actually have better performance than the hummer that gets, whatever, 15 miles per gallon. So that's the best of both worlds. Better energy efficiency and better overall performance. So energy levels is number two.

Dr. Gez Agolli: Energy is very important.

Dr. David Jockers: Exactly. Number three thing is reducing inflammation. We know chronic inflammation is underlying root cause of all degenerative disease. So when we think about degenerative diseases, we think about things like headache, diabetes, cancer, neurodegenerative disorders like Alzheimer's, dementia, and Parkinson's. We've got chronic pain, osteoarthritis. We also have autoimmune conditions like rheumatoid arthritis, Hashimoto's thyroiditis, different conditions like that.

Dr. Gez Agolli: In the past 10 years or so, we've seen an increase in all autoimmune diseases. And inflammation. Inflammation is the gateway to a lot of these chronic diseases, as well.

Dr. David Jockers: Absolutely. So fasting basically helps to regulate the immune system and downregulates what we call the inflammasome, which is characterized by these genetic pathways. Like tumor necrosis factor alpha, nuclear factor kappa beta. These different interleukins and cytokines. This whole inflammatory storm that the body creates.

A lot of people ask me, if inflammation is so bad, why does our body produce chronic inflammation. Well, number one, inflammation is bad. Inflammation is life-saving. And we know that systemic infections, or infections that have gotten in our body and spread throughout our circulatory system, have killed more people in the history of mankind than anything else. So inflammation is our body's adaptation response to that. Inflammation prevents infections from killing us.

If I get a cut on my finger, immediately I've got all these bacteria and pathogens that are getting into my bloodstream. And their one job is to break down decaying matter. That's all they're trying to do. My job is to not be decaying matter. So by having a healthy immune response, I create inflammation to actually protect against these bacteria from killing me.

Now, the problem is, when we have chronic inflammation. Inflammation should be short term. And so it helps heal wounds. It helps to repair tissue that's damaged. But it should be for a short period of time.

When we have this repeated cycle of inflammation, and it ends up breaking down and degenerating our body, fasting helps regulate and modulate or balance the inflammatory response.

Dr. Gez Agolli: Based on what you're saying around inflammation. Because we're talking around our society that we're seeing an increasing chronic inflammation, what Dr. Jockers is saying, longstanding. But inflammation actually is there to alert the body something is wrong, as

you mentioned. It's called acute inflammation. It's typically 72 hours. It's 72 hours where you have a rush of these white blood cells and these cytokines coming in to rescue.

When it goes past that period, that's when we get into cellular damage. This is when we're breaking down tissue. This is when you have all of these pain receptor sites. And you know, unfortunately, a lot of conventional doctors who are there to do the best to help you, some of their only tools in their box are to use these nonsteroidal anti-inflammatories, these NSAIDs. And we've seen some of the negative effects, the deleterious effects. We know it's affecting our digestive system. We know it's affecting our immune system. We need a healthy immune system.

So one of the solutions was to shut down the immune system. There may be a time for that short term. But long-term strategy, absolutely not. Fasting will break that cycle almost amazingly right away. That's the most amazing thing about the fasting. It just breaks it. When it doubt, fast.

This is how I was trained, as an integrative physician. A great example, Dr. Jockers, about inflammation. It's becoming a huge problem. And we could talk all day about that. We know inflammation is caused by multifactorial. But I don't want to just demonize inflammation. Like, the medical communities demonize cholesterol. Not all cholesterol is created equal. That's a different conversation.

But we have to understand that inflammation acutely is what our body needs. Chronic inflammation, we need better strategies. And fasting is one of the greatest strategies.

Dr. David Jockers: Yeah, for sure. I'm a natural health advocate. I talk about superfoods, and anti-inflammatory foods, just like a lot of other people do. But I tell people all the time, the act of eating itself actually produces inflammation. So fasting is the most powerful nutritional strategy you can take to reduce inflammation is actually fasting. So that's why it's so powerful.

The fourth benefit I wanted to go over is how it takes stress off the digestive system. This is so powerful, because our gut lining is only one cell wall. So when we look at our skin, there are many different cells that protect our bloodstream from the outside environment through our skin. Whereas with our intestinal lining, it's literally one cell. It's almost like my fingers right here, gripped together.

So when we're constantly eating and having food go through, it's very easy to damage those tight junctions between the intestinal cells and to open those up. And when we start to get these opened or intestinal

permeability taking place, where we have these open gaps within the cells. Now, large food particles, bacteria, different pathogens can seep into the bloodstream and ramp up that inflammatory process.

So by actually taking periods of time where we don't eat. We're able to regenerate that intestinal lining, and close tighten up those tight junctions.

Dr. Gez Agolli: It's an exciting thing how the body can regenerate when you rest it. And what Dr. David is talking about right now is something that we've talked about for a while, it's leaky gut syndrome. And I'm glad you talked about the tight junctions and gut dysbiosis and gut permeability.

Just by allowing the digestive system to rest, it gives the opportunity to regenerate those tight junctions. And that digestive system is so important. There's an old saying, you are what you eat. That's not true anymore. You are what you digest, absorb, and assimilate at the cellular level.

By resting the digestive system by strategy of fasting will get you your body's digestive system working optimally.

Dr. David Jockers: Exactly. And to go further on that, with all the digestive juices we do need to produce. We know stress is the antagonist to good digestive juice production. Meaning the more stress we're under, the less we're going to be able to produce the stomach acid we need to break down protein, to sterilize the food that's coming in. The less able we're going to be at producing bile, pancreatic enzymes. We're just not going to have effective digestion.

Fasting actually helps to destress our system. We can then be able to better produce those digestive juices when we do consume foods. So it's key for that.

It also actually helps to thin out our microbiome. So believe it or not, when we're consistently eating food, we're actually causing excessive fermentation in our gut. And an overgrowth, whether it's bacteria, yeast organisms, parasites, different things like that. So by fasting, it's like pulling out weeds from our garden.

So if we have a beautiful garden, a beautiful lawn, that's a great thing. But we all know, if you're trying to plant a lawn or a garden, there's going to be a lot of weeds that pop up. It's the same thing with our gut. We want to colonize our gut properly, and the food we eat does that. But even if we eat the best food possible, we're going to get a lot of weeds that are going to grow. Fasting is like helping trim the weeds naturally, gets rid of these things, and keeps our gut microbiome strong and hardy

and balanced. Well-balanced.

Dr. Gez Agolli: That is the key. The research we're finding out right now with the microbiome. There's a lot of research going on the microbiome right now. The key is the balance, is what you're saying. We know that there's billions and billions of bacteria. Some good, most should be bad. It's pretty much reverse right now in our society.

And the fasting in itself, because rest and digest system, as Dr. David just mentioned right now. It's just weeding, just pulling out the weeds.

Dr. David Jockers: It's so important.

Dr. Gez Agolli: Absolutely. Great strategy.

Dr. David Jockers: So the fifth benefit is stimulating cellular autophagy. And this is this term, autophagy, which basically means our body's ability to destroy its own cells. Or to recycle, break down old decaying cells, and the organelles within the cells.

So within each cell, we have all these different component parts. So the body is good at breaking down older cells and then also, not just that, but actually taking the compounds within the cell, breaking them down, and then rebuilding new, healthy, organelles.

So if we have dysfunctional mitochondria, the mitochondria produces energy within the cell. If we have a whole bunch of dysfunctional mitochondria within a cell, we're not going to be able to produce good energy. If we can't produce good cellular energy, the cell itself is going to become toxic and deficient. It's going to actually accumulate toxins. We're going to have more genetic or DNA damage because we have less antioxidants endogenously produced, produced within the cell. We can't protect the DNA from stresses of life.

So, the body actually starts to rebuild all these intracellular organelles, which is really powerful. And the other great thing about autophagy, this happens when we're fasting. Is that a lot of our cells are infected with things like viruses. And there's a lot of links in the literature between viral infections and chronic diseases, like cancer. So the best way our body actually gets rid of viruses.

Because viruses, in a sense, we can't actually get rid of them. With bacteria, we can take antibiotics, we can take anti-bacterial herbs like garlic or something like that, and kill these things. We can kill parasites. We can't kill viruses by taking herbs. We can keep them dormant, which is a good thing. But we can't necessarily kill them.

Whereas fasting, the body itself will get rid of viruses. When we go

through periods of time without food, the body will have this process where it will take cells that are infected, and will say, you know what? Let's get rid of these cells. Because it has this freed up energy. It will break down these cells, get rid of them. Now the virus doesn't have a home. And it will eliminate itself.

Now we'll take the cellular components that were good, we'll actually reuse those to help form new, healthy cells.

Dr. Gez Agolli: And that's what's exciting about what you're talking about when, I find autophagy fascinating. Studying that in biology and cell sciences. What you're saying, Dr. David, makes perfect sense. Because a lot of individuals are confused about viruses. You really can't kill a virus. You can inactivate a virus. You stop the message at the RNA and DNA.

And what's really interesting is that now we're finding out cancer is multifactorial. But we are seeing a lot of cancers happen, and come to fruition, because of certain viruses. And there's a lot of research right now with cytomegalovirus. We know there's a lot of other viruses, as well. What a great strategy that we can use fasting to get into that terminology, autophagy. Which is intracellular degradation and allowing new cells to regenerate and to communicate that are healthy cells.

Great strategy. 100%. And the way I describe autophagy in layman's terms is, if you can remember Pacman. Pacman is just gobbling up, gobbling up. And that's pretty much what the body is doing, gobbling up. And it's just getting rid of those bad cells and regenerating new ones. So that's really exciting.

Dr. David Jockers: Exactly. And the sixth benefit is it impairs genetic repair mechanisms. This is similar to what I was talking about, but basically it's more energy conservative for the body to repair a cell than it is to form a new cell. So what the body will do is basically we'll have certain epigenetics, epigenetics means how our environment impacts our genes.

So there are certain components, when we're fasting or going time without food. We get this epigenetic expression of the cells, where they start to go in and repair these organelles. And actually basically regenerate them and make stronger, healthier cells.

A lot of people ask me, if I fast, will I lose muscle? And I say, you know what? You fast, you'll lose the muscle you don't want. You'll actually build healthier muscle cells. And then when you do eat, and you go back to training your body properly, you'll be stronger. You'll build healthier, more stress resistant muscle cells. The muscle cells you really want in your body. So this is this genetic repair mechanism. Super, super powerful from that perspective.

Dr. Gez Agolli: That's a very powerful genetic expression and repair. Fascinating how that works at the cellular level with the genes.

Dr. David Jockers: So the seventh benefit is the stimulation of stem cells. And regenerative medicine. Which, I know you have a clinic, you founded a clinic that was involved with this, and is still involved with this. So the regeneration of stem cells, or basically stem cell medicine is growing really fast. A lot of people are seeing incredible breakthroughs with stem cells for repairing joints. Whether they need a hip replacement, but they ended up getting stem cell injections or knees or things like that.

Stem cells are basically baby cells that can differentiate into forming new healthy cells, and they're versatile. Meaning they can produce a wide range of different cells. So when we fast, we actually stimulate stem cells. In our gut, it only takes 24 hours of fasting before we start stimulating stem cells in our gut, according to MIT researchers.

So that means we can regenerate that leaky gut. And that's why a lot of people with gut issues, if I can get them doing 24, maybe 36-hour fasts, things like that, every week. We start to rebuild that gut lining.

Dr. Gez Agolli: I'm so glad you're mentioning stem cells. Stem cells, as you mentioned, baby cells, naïve cells. But a lot of individuals understand, we're born with billions and billions of these stem cells. This is why you can see a young child get injured, and they get well so quickly. But as we age, we start to lose these stem cells. And by the time, I hate to say those individuals in their 60s and 70s, you probably have less than 1000 stem cells.

But the great news is, just by utilizing the benefits of fasting, you can regenerate some of those stem cells. Regenerative medicine is a really exciting period right now in healthcare. And we can take individuals that are bone on bone and intraarticular inject that area with a qualified practitioner, and we get some really great results.

But, systemically, which we're talking about, one of the best ways, besides having good nutrition, is fasting to regenerate those stem cells.

Dr. David Jockers: Exactly. So the best research on stem cells is showing that roughly after 48 hours, you start ramping up stem cells. And something like a 4 to 5-day water fast, you're going to get the best benefit when it comes to stem cells.

So regenerative medicine is amazing, but it's quite expensive. And not everybody is going to be able to access that. But everybody can start practicing a fasting lifestyle and boost their own stem cells naturally. So that's the really great thing about that.

The eighth benefit is improving insulin sensitivity. Insulin is this hormone that is, what we call a fat storage hormone. Insulin has a very important role. It takes sugar out of the bloodstream, puts it into the cells. If we don't get rid of sugar in the bloodstream, if we don't get it into the cells, number one we can't produce energy with it. Number two is high blood sugar is neurotoxic.

If you think about a diabetic who is uncontrolled, right? So they have really high blood sugar. Those sugar molecules are binding to proteins, creating advanced glycolytic enzymes that damage the kidneys, the endothelial lining of the blood vessels. Damaging the heart, or the circulatory system. And also they damage the nerves, causing peripheral neuropathy, retinopathy, different issues like that.

So the body has this mechanism with insulin to shunt the sugar into the cells to produce energy. But insulin, if it's high, if it's elevated, once it reaches a certain threshold and it goes above that, and it stays above that for a period of time, it's also going to amplify the inflammasome, meaning it's going to turn on inflammatory gene pathways in the body. So it's going to increase inflammation.

So, if we're consistently eating lots of meals. Particularly meals that are higher in carbohydrates, we're going to be consistently increasing. Causing these surges in insulin, which continually tells the body to create inflammation. We also start to get a blunting of the insulin receptor. Meaning that the receptors on every cell that listen to the signal of insulin, and let sugar in, they start to become blunted and less responsive.

It's like trying to knock on a door, and let's say the person that's in there has headphones on. They're not listening. So you've got to knock harder and harder in order to get the same message through. That's what happens with the cells.

So by creating better insulin sensitivity, you need less insulin produced when you do consume food. And that way, you don't hit that insulin threshold where you start to amplify these inflammatory pathways. And that's powerful.

Dr. Gez Agolli: I'm so glad you mentioned insulin, because insulin is such an important hormone. For many functions. Because not only, as you said, it's very, very important for lowering the glucose. But I give this example to a lot of individuals that I'm educating. If you have elevated glucose, and the insulin is not functioning properly. Because insulin basically just unlocks the door for the cell to get in to create that cellular energy we're discussing so much about.

But I give this example when glucose is elevated and it's not getting into

the cell. It's almost like having orange juice, and you put it on the floor. And you actually go barefoot and you walk on the orange juice, and it's sticky. Guess what happens? That stickiness that you feel on the bottom of your feet, that's happening in your cell.

It's called sticky-sticky cell, sticky-sticky protein. And this is why the endothelia, which is responsible for that nice nitric oxide and bringing in transport of oxygen and other nutrients throughout the body becomes occluded. And this is where you get cardiovascular disease. We have kidney disease. All of it becomes glycated. And the body becomes sludge.

So one of the greatest strategies, and there are physicians, endocrinologists, that are specializing in treating type 2 diabetes and type 1. But I want to stay on type 2 for a moment. Type 2 used to be called adult-onset. Now we're having children, teenagers getting type 2 diabetes. So really it is a disease for all. It has to do with our food supply. It has to do with high fructose corn syrup and all of these high carbohydrates.

But here's the key. If you were to use the strategies Dr. David is talking about, by just using intermittent fasting. Whatever strategy that you decide to do. You're going to lower that insulin level to become actually very sensitive. And there's a lot of research going on between 16, 18, 20 hours. But I'm seeing research that you're going to lower it as low as 90%, Dr. David. 90% that you can lower that insulin to become more receptive. Just by fasting 16-20 hours consistently. That's exciting.

There isn't a drug. There isn't a nutrient. There isn't an herb as powerful. And the best part about it, it's transformational. It's inexpensive, and it's powerful. This is what this fasting summit is all about.

Dr. David Jockers: It really is. And just kind of piggybacking on that. It also reduced, and this is really the ninth benefit. It reduces your chronic disease risk. So we talked about all these different degenerative diseases associated with insulin sensitivity and chronic inflammation. So obviously by reducing those things. By improving insulin sensitivity. And also by reducing inflammation, it's going to reduce your risk of developing chronic disease. Powerful.

And then the tenth benefit is improving your relationship with food. There are so many people out there that really have food addictions. And I think all of us, at times, have food addictions. I know for sure for myself. If I get started with sugar, and I'm, in a sense, repeatedly eating sugar over several days, it's like I'm craving it. I just want something sweet. I have to have it.

So by taking time to periodically fast, whether it's on a daily basis with

intermittent fasting or whether it's saying, ok, I'm going to take a one-day or a three-day period of time where I don't consume food. It's a really great way to reset your relationship.

Dr. Gez Agolli: It's safe to say, Dr. David, that all of us suffer with these addictions when it comes to food. Or anything of that matter. So it's powerful to break that cycle.

Dr. David Jockers: Absolutely. It really helps to reduce your cravings. And you just appreciate the food that you are consuming so much more. When you're doing this intentionally, and really doing it with the right mentality. So that's powerful.

And then number 11 is improving mental health. When I'm fasting, my body is using ketones as primary fuel source. I feel my most efficient. My most creative. My best work when I'm writing thoughts and ideas that I have comes with I'm fasting.

After I eat dinner in the evening time, my wife always asks me, do you need to work a little bit tonight? I'm like, I probably do, or I probably could. But my work isn't going to be my best work, so I might as well not. And the reason why is I'm well fed. My ketones go down. I'm not as creative. When I'm fasting, my creativity is enhanced.

In fact, a lot of the sages throughout history. Aristotle. Plato. They say things. Plato has this quote where he says, "I fast for greater mental and physical efficiency." So people have known that they produce their best work. That they think their best thoughts when they're in a fasted state. And I've personally experienced that, and many other people fasted would say the same.

Dr. Gez Agolli: There are reports from the beginning of time talking about that. We know that certain individuals have done spiritual fasts to get a closer connection to God. And a lot has to do with our cognition, as well. And we're relying on the spiritual and obviously creating that energy.

I think as you mentioned before, with the ketone bodies helping the brain function work more optimally. So that's a great strategy, and a great benefit.

Dr. David Jockers: Yeah, and that takes us right into the 12th strategy, which is fasting helps improve our spiritual development and our intuition. So I'm a Christian, so I look at the bible and I see many people that fasted. Jesus fasted for 40 days. He talks about, when you fast. He talks about prayer and fasting as the most powerful healing strategy, prayer and fasting.

So reshaping your mind, your spiritual walk. And then also fasting. I've heard other people say that an element of prayer and fasting is actually not just fasting from food, but also fasting in your thoughts. Fasting from negativity and focusing your thoughts on one really powerful idea or powerful concept or your connection with God. Right? So it's just so powerful from that perspective.

For somebody out there, and you don't have a spiritual walk, that's ok. Don't be turned off by this. You might say it as something like intuition. As a Christian, I would say, I feel like I hear the holy spirit better when I'm fasting. If you don't have a spiritual walk, you might say something like, I feel like I'm more in tune with my intuition.

And there's great benefit to being in tuned to your intuition. You're going to make better decisions with your life. You're going to feel better. You're going to feel more confident in the direction that you're going. And as Christians, or as people that have a spiritual walk. If you're hearing from the holy spirit and walking in that, you really feel confident and certain in the direction that you're talking.

We live in a very uncertain world. A world that's constantly bringing challenges our way. So being able to hear from the holy spirit. Or having a well-tuned intuition can be a powerful source.

Dr. Gez Agolli: We live in challenging times right now. And as Dr. David is talking about, regardless of what your spiritual beliefs are, as also a fellow Christian, as well. We respect every individual. But the reality is, since the beginning of recorded time, there has been religious leaders talking about the benefits of fasting, as David just mentioned. Jesus fasted for 40 days and 40 nights. Because he was being tempted. He was getting closer to his father God.

But ultimately, we've seen all different types of religions talk about fasting. It's not only for Christians, it's for every human being. Even if you're an atheist, agnostic, it doesn't really matter. But from a Christian perspective, it's one of the most powerful tools that we have. To abstain from eating food sources.

Not water. Obviously, Jesus did not have any water at all, which is pretty incredible. But we don't recommend that, by the way. We recommend having water. Jesus had that fast for different reasons. But clearly when you fast, you're allowing your body and your mind and your spirit to not only rest, but to also be receptive to what God has in store for you.

Regardless of what your spiritual beliefs are, this is a powerful time to reflect and to meditate and to allow the creativity. Which David and I, we call the holy spirit tugging at us. Whatever that is for you.

David, those are just great words of wisdom. The 12 benefits, I just want to run by them very quickly. Number one, stimulates fat burning. Number two, improve energy level. Number three, reduce inflammation. We're living in this chronic inflammatory state. Number four, take stress off the digestive system. Very important. Number five, stimulates cellular autophagy. One of my favorite words in cell biology.

Number six, improve the genetic repair mechanisms at the cellular level. Number seven, stimulate stem cells. Very, very important to do that. Number eight, improve insulin sensitivity. Which is probably the key to combatting type 2 diabetes. Number 9, reduce chronic disease, which is at an all-time high in the history of the United States right now, and North America.

Number 10, improve relationship with food. Right now, we have all these different addictions to food. And we're being challenged by many areas of food. Whether it comes to fast food, any type of food. All of these fast foods. Everything is about convenience. But is it convenient for the body's healing? No. Number 11, improved mental state. And number 12, we just talked about, that spiritual connection. That health intuition as well.

These are great, great benefits you had, Dr. David. Any other final words of inspiration and wisdom for our listeners? Because you're just full of that. And I just want to thank you for being instrumental in bringing the Fasting Transformational Summit. Any other words of wisdom for our listeners?

Dr. David Jockers: Yeah. I would say I had this idea for the summit really through fasting. I just felt the Holy Spirit telling me this needs to get out. People need to be armed and equipped in order to improve their health. And fasting is one of the best strategies in order to do that.

So I hope you've gotten so much out of this interview and the interviews in this summit. I want to remind you that fasting, when I really break it down to a simple sentence, it has the ability to unlock the dormant healing potential within your body. It is safe. It's powerful. And it just might transform your life. So give it a shot and try.

Just remember, think of it like exercise. It's not meant to be comfortable when you first get started. It's going to be uncomfortable. That's ok. Lean into it. You don't have to be dogmatic, if your goal is to do a 16-hour fast and you break it at 14 hours, it's ok. You did 14 hours. That's fine. That's great.

Use the strategies we talk about throughout this summit in the Fasting Transformation Quick-Start Guide. I go through a lot of different things. If you do that, you will have success. You've just got to keep the right

mentality about it. And then you just train your fasting muscle. And over time, you will be applying the fasting lifestyle and I believe that you'll see amazing results with it.

Dr. Gez Agolli: There you have it. Thank you Dr. David Jockers. Hi, I'm Dr. Gez Agolli here at the Fasting Transformational Summit. Stay tuned for more great interviews coming by. God bless you guys, and we'll see you next time, here at the Fasting Transformational Summit.

Fasting to Build Resilience to Stress

Guest: Pete Sulack, DC

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. I'm your host, Dr. David Jockers.

And in today's interview, we're going to really talk about stress. Stress's impact on our health. And how fasting can help our body basically develop resilience here. The ability to adapt to stressors in our life. The ability to blunt the negative effects of stress. We're also going to talk about other strategies beyond fasting that can really help your body deal with stress.

I think all of us can relate with the impact of stress. So today's interview is going to really help your body, or basically just help you with strategies and how to use fasting to help overcome the detrimental effects of stress.

In order to go through that in detail, I brought on America's top stress expert, my good friend Dr. Pete Sulack. Dr. Pete basically built one of the largest natural health clinics, Exodus Chiropractic, in Knoxville, Tennessee. People travel from all over the world to see him, to be adjusted chiropractically, to get valuable health information from him.

He also developed the company called Stress RX, which is basically a supplement with adaptogens, and we'll talk about that. It really helps your body adapt to stress more effectively. He also has Matthew 10

Ministries, as well, which is just an amazing nonprofit organization that's a global outreach. It cares for orphans, widows, and the poor in India and other parts of the world.

Dr. Pete has been a mentor to me, in particular when it comes to just my own spiritual life and spiritual growth. So it's an honor for me to have Dr. Pete on our Fasting Transformation Summit. Welcome to the summit, Dr. Pete.

Dr. Pete Sulack: Hey Doc, it's an honor to be with you, as always.

Dr. David Jockers: Absolutely. So let's go through your story, and how you really got into becoming a doctor and working with people all around the world.

Dr. Pete Sulack: You know, it's one of those things that everything in my life that's good is in spite of me, not because of me. And when it comes to chiropractic, God's been very gracious to us. I love what I do. In 17 years of practice, by the grace of God, we've seen over a million patient visits that come from all over the world right now. But I love what I do now more than ever before. I love serving patients.

When it comes to the whole nutrition side, when it comes to some of these things that we can do, these intangibles, I was very clueless. Even just a few years ago, having one of the largest clinics in the world, serving people, when it came to nutrition, I didn't have a clue.

I remember my wife would go out of town, and I would go to Little Joe's Pizza. I would get a large pepperoni and green olive for dinner. I'd have half that night, half the next morning for breakfast. I thought pizza was the perfect food.

But I've come to realize that's not the case. And I've gone on a real transformation for myself simply because I felt the lord say, son, do not become a Blockbuster in a Netflix world. We all know Blockbuster was on every corner across America, Netflix came. And actually, the story goes that Netflix offered Blockbuster the opportunity to buy their company, and the owner of Blockbuster said, no, we're the man. We don't need Netflix. And now Netflix is everywhere, Blockbuster doesn't exist.

The lord kind of spoke that to me. He said, son, I want you to remain teachable. And it was even more of a fact that I want you to finish the race. I see so many people in my life that they have a heart for God, they have a heart for serving people. But they don't have the health that will sustain them.

So I really went on a journey, Dr. Jockers, to empower myself to really

figure out this thing called health. More than just seeing patients each and every day. How I can help them really in their whole life, in their whole health, really begin to get on the road to health. And I had to start with me. So it's been a journey. It's not something that's been easy for me and my family. But I'll tell you what, the dividends have paid off hugely in our life. We're very, very thankful.

Dr. David Jockers: Yeah. For sure. Absolutely. It really takes a humble mentality to do that, because as doctors, most doctors are high performers. So we kind of have this know it all mask that we put on. It's like, ok, I know everything, so I don't need to continue to learn. But you have a real humble spirit, and just a quench for learning.

So, obviously, as you dove into the underlying root cause of chronic disease, and why people are suffering in our society today, you uncovered that stress is really the root cause. So let's talk about stress. What it is, how it impacts our physiology.

Dr. Pete Sulack: Stress is one of those inevitable things of life. Stress is going to affect us every day. If you want to talk about a guarantee, it's the fact that we're going to face stress each and every day of our lives.

But I think we have to clarify that as well. Because a lot of people, if I ask you, "Do you have stress?" and things are going well at the moment, they say, "You know what, Dr. Pete? I don't have much stress." I ask another person, "Do you have stress?" they say, "Lord have mercy, I have a lot of stress."

Stress is just more than drama. I remember when President Trump was elected president a few years ago, the Friday morning after the election, People Magazine called me for the first time. So did Redbook and the New York Times, the Washington Post. They all wanted to know how to deal with the stress of our new president.

But stress is more than just drama. Stress is physical. Car accidents, falls, whiplash injuries. Sitting at a desk all day. A sedentary lifestyle is physical stress. Stress is also emotional. Life, relationships, abuse, trauma. Stress is also chemical. The foods that we eat, the air that we breathe.

I think a lot would know that asbestos is a chemical stress. We have sugar and aspartame and high fructose corn syrup. But gluten is a chemical stress, so is the protein in a lot of dairy. Beta casein-A1, you talked about in the past, is a chemical stress. And the fact of the matter is, we're going to face stress every day of our life.

So health is really not about eliminating stress. Can we minimize it? Absolutely. But health is creating resiliency to the stressors of life. And allowing the body to adapt and recover to stress effectively.

Dr. David Jockers: Yeah. So let's talk about stress resiliency. I love that term. And I'm a huge fan of saying, hey, I want my body to become stronger. I tell my clients all the time, don't wait for life to get easier. Maybe it will for a few months, here and there. Instead, work on getting better. Working on strengthening your body and resiliency. So let's talk about what that is, and things people can do to help build resiliency.

Dr. Pete Sulack: When it comes to stress, stress is the body's internal mechanism to deal with this external world. If stress is anything that brings the body away from equilibrium and balance. So away from a place called homeostasis.

Resiliency becomes my body's ability to leave homeostasis, and adapt to the stressors of life, and recover from it. There are two kind of scenarios, one, my body adapts and it takes a long time to recover. And another is, my body adapts and doesn't recover. Medicine calls it HPA axis dysfunction, simply the body went into a fight or flight response and didn't recover. And that's a very dangerous place to be.

In fact, if you begin to look into medical studies and medical literature of the top 70 diseases on the planet, they can be rooted back in what's called HPA axis dysfunction. Simply the body went into a fight or flight response and never got out of it, so the body got stuck in a fight or flight response.

It's like going to the zoo and a tiger gets out. Well that's going to be a stressful situation so my body adapts physiologically. Which is a good thing. My heart rate goes up, my blood pressure goes up. But if we don't cage that tiger, we never allow the body to get back.

There are a lot of people that have so much stress in their life, that their body has adapted and not recovered. That's a scary place to be. So we want to make sure the body is always in a position to adapt effectively and recover from it.

Be like the zebra. The zebra are the one species that are always on the run. Talk about a stressful life. Try to be a zebra, they always have a predator chasing after them. But what the zebras don't get also is this kind of bring to light, when we study the physiology of a zebra. When a zebra gets away from the predator, whether the lion or the tiger, within 30 seconds the body restores itself to homeostasis and rest. So zebras can't get ulcers, why, because they're so resilient. Their body has an ability to adapt and recover very, very effectively. And health is based on resiliency.

A lot of people are assuming that germs make you sick, for instance. If that was ultimately the case, we'd all be dead. The truth of the matter is, germs make a weak host sick. A body that is no longer resilient. So if the

food comes into our household, not everyone in our household gets the flu. Who gets the flu? Those who are no longer resilient.

So health is based on my body's ability to deal with life, the stressors of life, and recover from it. And the more my body is able to do that effectively, the more resilient the body becomes.

Dr. David Jockers: Powerful, for sure. I read that book, *Why Zebras Don't Get Ulcers*. And you're right, they have this fight or flight response. They react, they survive. But then very shortly after that, they're in a more relaxed state. So the parasympathetic nervous system turns on, and their body is able to recover effectively from that.

Where as in our society, we get rejected by something. Some sort of emotional stress. And it's like, we're dwelling on that for days on end, oftentimes. Sometimes for months and years on it.

So let's talk about some strategies that you recommend for people when it comes to building stress resiliency.

Dr. Pete Sulack: Absolutely. One of the things you have to understand, if the body ever gets stuck in a stress response first of all, in the HPA axis dysfunction, studies now show there are three main ways to get the body back to homeostasis and equilibrium, to really restore the resiliency.

Number one is our attitude. In fact, I've seen it said that negative thoughts put our body into further stress response, but positive thoughts restore the body to homeostasis and rest.

Number two are what are called adaptogenic herbs. And we know that adaptogens are unique, because they affect the HPA axis in the body to help the body restore itself to homeostasis. They act like a thermostat in the body. So, caffeine is a stimulant, with uppers and downers. But the uniqueness about adaptogens is they do both. They're there to restore homeostasis to bring you up or bring you down.

The third way is movement. They talk about proprioception. If the body goes into a stress response and gets stuck there, movement is one of the greatest ways to help restore homeostasis and rest. So if I can incorporate a good positive mental attitude, incorporate adaptogenic herbs, if I incorporate movement into my life, those are great ways to reinforce our body's ability to always get back to homeostasis.

And then there are ways that we call purposeful stress. Purposeful stress are things that allow me to strengthen this pathway. My body's ability to adapt and recover. Fasting is one of those things that, does it cause stress in the body? Yes, but it's purposeful. It's a good beneficial

stress to help increase the body's resiliency to deal with life effectively.

Dr. David Jockers: Yeah, for sure. It's kind of the theory of hormesis. Where actually being exposed to mild stressors and allowing our body to come out of homeostasis, but then readapt builds that resiliency muscle. I always tell people, fasting is like a muscle. So if you were to go to the gym and start training, in the beginning, you would be really sore. You'd feel weak. You'd feel tired. But, over time, obviously as you continue to adapt and recover from that. You get better, more effective with it. Kind of the same with fasting.

I know the bible talks a lot about fasting and prayer as one of the most powerful forms of healing. So, why would that be? How does that impact our stress response and our body's ability to build resiliency and heal?

Dr. Pete Sulack: One of the things, Dr. Jockers, in Matthew 17, there's a great picture of prayer and fasting. The disciples are up on the mountain, and a gentleman comes with this young boy. And this boy has epilepsy. He's been thrown in and out of the fire. And he brings this boy up to the disciples who have been with Jesus about the last 2.5 years and says, hey, can you heal my boy? And they pray for him. And the body is not healed.

So the man comes off the mountain, he comes up to Jesus, and says, your disciples prayed for my boy but nothing happened. Jesus response, oh faithless and perverse generation. He's not speaking to the man, he's actually speaking to his disciples. He said, certain ones only come out through prayer and fasting.

He wasn't even talking about epilepsy as this hierarchy, like a more difficult disease. But he says, mindsets contrary to truth only come out through prayer and fasting. Prayer and fasting, especially in our spiritual walk, is a great way to get our perspective back. To prepare the wise that can handle what God wants to do in our life. Prayer and fasting is a discipline that incorporate on a daily basis. Making sure every single day, I live according to the right perspective.

So often in this world, this world gets up in our face. It drowns out the reality of who I now am as a child of God, and I lose perspective. And one of the greatest ways to lose perspective is I go back to being self-centered. Living for me. And the reality is, my only enemy in this life, my only problem is me living for me. So prayer and fasting is a great way to get my perspective right. Really remove some of those mindsets in my life that are contrary to truth.

Dr. David Jockers: I love that. I think just in general that selfish element of us, our flesh, is all about consumption. It's about getting for itself. And fasting, from a physical perspective, you're denying that. And in prayer,

like you talked about, you're changing perspective. You're realizing that you're just a small speck on this planet, and that really God is in control of your life. So I love what you had to say about that.

Now let's talk about intermittent fasting. I know this is something you practice on a regular basis. Let's talk about the impact that has on our physiology, in particular our body's ability to adapt to stress.

Dr. Pete Sulack: Intermittent fasting, Dr. Jockers, is something that I really began to incorporate in my life when the lord began to say, hey son, if you don't take control of your health, you're not going to finish the race. And it's not how I start the race, it's how I finish the race.

I remember before I did intermittent fasting, I'd come see my patients. I'd be very present time, conscious so to speak with my patients in the morning. Then you'd go have this lunch at noon, and you come back and you feel groggy, so to speak. Now I don't have that at all.

Monday through Thursday, when I'm seeing patients, I practice intermittent fasting. I use a supercharged coffee. So good healthy fats. I get good calories with good antioxidants and everything in the morning with a lot of water. And then I eat at night.

So I kind of rest my digestive system, but more than that I have clarity throughout the day. I'm never tired. And one of the biggest reasons, is because I want to give my patients the best me. Intermittent fasting is one of those things that rests my digestive system, it's that hormesis theory. It puts the body under stress, but it makes my body more resilient. So I can really consume energy, have clarity of thought, and really serve my patients as effectively as possible.

Dr. David Jockers: Yeah, it's profound the impact it can have on your mental clarity, as your body starts to produce these ketones. And those ketones basically help stimulate different nerve growth factors in your brain, help link deep thoughts and facts. One of the benefits is increased amount of gaps between the neurons in the brain. In the synapses.

When they studied Einstein's brain, they thought he might have more neurons. But he actually had the same amount of neurons as anybody else who had the same volume of brain. But he had twice as many synapses, these little gaps between the nerve cells. So these gaps allow us to have this incredible flexibility of thought. Adapt to stress more effectively, mentally and emotionally. So, the fasting is one of the best ways to impact that in our brain. So, absolutely. You're feeling the effects of that.

And it keeps you focused, too. So you're seeing all these patients, coming from all around the world. Obviously you see thousands of

patients, so you're able to fully focus on giving the best possible care. Because you're not eating. Obviously, when we eat we start to draw blood into our digestive system and away from our brain. And kind of cloud our thought.

Dr. Pete Sulack: Absolutely. And then we're getting good calories. A lot of times, as a father of 4 boys, being ignorant to some of the different nuances of what health really was for a long time, we just wanted to give our kids a bunch of calories when they went to school so they didn't come home full. But we weren't giving them that clean fuel.

And we know that the mitochondria takes the fuel and calories that we consume and the byproducts are free radicals. It kind of is, I put fuel in my engine, and I get to where I want to go, but it's at the effect of lots of corrosion. It's like, I go to Kroger's, I put gas in my tank, but it's a dirty fuel.

Now, all of a sudden I'm incorporating a good clean fuel, so the body can use that. Not only am I going to get to where I want to go. Not only do I have the energy, but I don't have all the nasty byproducts that I used to have from all these foods I was consuming that were increasing blood sugar and everything else. Now I just feel so much better. It's a clean fuel that I'm consuming so I can be more effective in serving the patients that are there before me each and every day.

Dr. David Jockers: Absolutely. Let's talk about extended fastings. I know you've done this, as well, before. And so how does extended fasting impact us? Let's talk about some of the reasons why you fasted in the past.

Dr. Pete Sulack: One of the things, too, is I'm going to be honest with you, doc. When I was in chiropractic school, a lot of people talked about fasting. It was a way that I can almost make myself better. It seemed very legalistic. At the end of the day, my wife was saying, hey, if that's what fasting is. You're grouchy, and you're ordinary. That's not what it is.

But when I really began to pursue the things of god, and when I began to fast simply so I could gain the right perspective, it was no longer legalistic and I felt like the lord said, son, there's grace in fasting. So whether it's one meal, or whether it's 21 days, or whether it's 40 days. I wanted to become intimate with you. And I want you to begin to see clearly.

And I just want you to know, if you're someone that's never fasted before, there's grace for you. God just desires your heart. And it's a great way for me that I can say, lord, I'm going to surrender myself. I'm going to give myself to you. Not only does it have great health benefits, but it's also great to make sure my perspective is always right. It's a death to

myself each and every day. It's preparing of the wine skin so that God can have complete freedom in my life.

You know, Daniel in the body went on a 21 day, we call it the Daniel fast. We know that Jesus went on a 40-day fast. Moses went on a 40-day fast. Even when you look at Socrates, when you look at Plato, when you look at da Vinci. They all went on fasts with such benefits of fasting. But for me, it's just to increase the sensitivity I have with the lord and the voice of God each and every day of my life.

Dr. David Jockers: Yeah, absolutely. I know I recently did a 5-day fast. And actually, the first two days were because I was really, really sick. I actually had the stomach flu. So it was like, I couldn't get anything down. I didn't even think about food. And as day 3 and day 4, just all of a sudden felt absolutely incredible. Just mentally clear. Relaxed. It was like, life changing.

And that had a lot to do, basically ketones in the brain impacting my brain. And again, just the denial of self. The denial of flesh. The denial of this constant need to consume. Which I think is really kind of that fleshy element of our body. It takes you out of the kind of survival, I've got to eat and consume to survive and more into this being of existing. We're just existing and experiencing life, rather than focusing on consuming. So that's been my experience.

So let's talk about some things that can help somebody adapt to fasting more effectively. Because like you were talking about, especially when somebody is not used to it. Any time you make a major change in your diet, nutrition habits. Whether it's dropping carbs quickly. Or if you're on a very low-carb diet, you increase a whole lot of carbs. Any sort of change like that, or just not eating, fasting. It's a stressor on the body. The body has to reregulate itself. Create new enzymes. Create new compounds. So that's going to be a stressor. So what kinds of things help us adapt more effectively when we start to fast?

Dr. Pete Sulack: I think, too, just understanding that there's grace for you. As we begin to fast, start slowly. Whatever you feel peace with, that's ok. A lot of times, I know a bunch of individuals. They're saying, I'm going to go on a 21-day fast. They've never fasted before. And I say, hey. Let's start slowly.

Just so that condemnation and judgement and shame and all these things begin to try to make their way in our life, and that's not the lord. That's the enemy. So just know that, hey. Let's start slow. And then let's prepare ourselves in advanced.

One of the things you've taught me in the past is gut health, and how imperative it is to have a good gut when we begin to fast and we

begin to detoxify the body. Even detoxifying ourselves from some of these mindsets contrary to truth. So making sure you're continuing to stimulate and have good gut health. Making sure you're drinking a lot of water. You're getting good, proper rest. That you're spending some time. You're getting out and earthing and some of these things that you talk about just so that you can have some time to really handle. Really, as you begin this journey, to get healthy and stay healthy.

So for me, I know I needed grace. When my wife started fasting, it's like, there has to be grace there. God desires just our hearts. So often, we feel like we're failing God if we break a fast. That's not the heart of God. God just says, hey, I love it when you give me anything. So just be encouraged as you begin this journey, just offer the lord anything you have. Rest in the fact that he's very well pleased.

Dr. David Jockers: That's so good. Fasting really isn't about performance. Which is how we're so wired, again, that's something from the flesh. We've got to be able to perform. I've got to be able to do this 5-day water fast, or whatever it is. And you don't, you're right. Like you said. Really, I just tell people try this and listen into your body.

Things that can help, stuff like you talked about. For me, getting out in the sun. Getting grounded, where I get my bare feet on grass, dirt, sand. Even just before this interview, and I do this several times throughout the day when I'm working from home. I take a barefoot walk around my neighborhood. I just basically took a quick 10-minute jog around my neighborhood because I'm sitting a lot, and I want to just get up and get my body moving.

You were talking about how that can help impact stress. It's sunny out today. I love getting in the sun. Getting really high quality sun exposure. Getting my body grounded. The free electrons from the ground coming in, which help my body adapt to stress more effectively. I drink a lot of water.

So water can be one of your best friends when you're starting to fast. Because you'll naturally kind of feel, there's a hunger hormone called ghrelin that will come out when you have nothing in your stomach. And that ghrelin is going to tell you, I'm hungry. In fact, you may even feel your stomach growling. That's your ghrelin causing you to growl.

So when you drink water, you start getting something in your stomach, and that will suppress the ghrelin. You'll actually feel like you have more energy. Because we're really hydroelectric beings. Meaning we're going to produce energy through water and electrolytes. We actually don't eat for energy, we eat for adaptation and recovery. So we have the building blocks to recover from obviously the daily stress.

We drink and take in electrolytes. A little bit of salt. For energy. You can get tons and tons of energy and mental clarity by staying well hydrated and using electrolytes. So that's what I always tell people. If you feel hungry, try drinking 8 ounces of water. Maybe even taking in a little bit of salt, putting it under your tongue. Just a pinch. And then give yourself 10, 15 minutes, and see if you're still hungry.

If you're still hungry, feel like you need to break the fast, go ahead and break it. But go with water first and see. And what most people tell me is that 90% of the time, it actually blunts the feeling of hunger and they actually feel a lot better, and they have more energy and are able to go longer. It's just a simple, easy strategy.

Just like you, I'm a huge fan of adaptogens. And you were talking about how they help us adapt to stress. So what are some of your favorite adaptogens that can help somebody deal with whatever stressors they're dealing with, as well as utilizing them on a fast. Because these herbs, they don't have calories. You're not consuming calories when you consume them. So you're not actually breaking a fast. But it's giving you compounds that can help your body build resiliency and adapt more effectively so you can have a better experience on the fast.

Dr. Pete Sulack: Yeah. One of the things too that I'm obviously a big advocate of adaptogens and empowering your life with adaptogens. That's why we created Stress RX to kind of create that resiliency. Ashwagandha is one of those things that's great with reducing cortisol. It's great balancing hormones. It's great helping restore homeostasis in the body. I love cordyceps, which is a powerful way to boost the immune system. I also love rhodiola, which is a great way for recovery. For athletic endurance. For athletic recovery. For muscle recovery. Powerful adaptogens.

There are adaptogens that you talk about all the time, as well, like holy basil and others that are just great for helping us increase the resiliency of our lives and the stressors of life. Stress is inevitable, like we've mentioned. But it's creating resiliency in the face of stress so we can really face this life and manage stress rather than stress managing us.

Especially when you're breaking a fast, or in the midst of that fast. Adaptogens are so powerful in helping you really begin to sustain your energy level. Sustain your body's ability to adapt and cope the way it's supposed to. And really thrive in the midst of that fast.

Dr. David Jockers: Absolutely. And, one of the great benefits of fasting, you get this process of autophagy, which many of our speakers have talked about. Where your body, in a sense, self-eats. It breaks down old decaying cells. And helps use those raw materials to help regenerate new cells.

Studies have shown actually that these adaptogens help assist with that. So they can actually help the body to get better benefits of autophagy while you're fasting. So great strategy to use. I know you've got a product called Stress RX. Which is a fantastic product. It uses ashwagandha, rhodiola, cordyceps. Again, these adaptogens, to help your body adapt to stress. So really good stuff.

One other thing I wanted to mention, too. Especially if you're somebody that, and this is most of us I would say. Fasting can be daunting because one of the great pleasures, one of the great joys that we experience in life is having dinner. Or having lunch. Whatever it is. And if you're trying to do an extended fast, or even at times, intermittent fasting. If you're trying to miss dinner or miss breakfast, but you absolutely look forward to that meal every day. Really change your perspective.

Try to find something else that you can look forward to. Whether it's a walk. Especially for extended fasting. I'll tell people, since you're not spending money on food while you're doing your extended fast, take that money and get a massage. Get a massage every day. Or get a massage every other day. So you've got this thing you can look forward to that's actually going to assist your fast. Help you actually adapt to stress more effectively. Help benefit your body. And it feels good, right? Which doesn't hurt. So that's another strategy I wanted to leave the listeners with.

Dr. Pete, any final words of inspiration for the people that are out there? Tell us about where more people can find out more about you, and the products you're creating, as well as your clinic.

Dr. Pete Sulack: Absolutely. It's one of the things I tell my patients. No matter where they find themselves on this health journey. If we can simply turn the ship around, I rather find you on death's door and get the ship turned around and gain momentum, then looking at health from the wrong perspective. And too often, people assume that they feel good, they're healthy. If it's not broke, don't fix it. And they're going in the wrong direction.

So we get so many patients like you do, they come from all over the world. They have a death sentence on their life. The greatest joy that I have is giving people hope. There's hope, there's a confident expectation that no matter what you've been dealt with, there is hope for you to get better. That's one of the greatest privileges we have.

We created a company called Stress RX. It's StressRX.com. The proceeds go to our humanitarian work around the world, really earning our right to share the good news of Christ around the world. And then obviously on social media, we can be found there. Whether Instagram, Facebook, YouTube, and so forth. But it's been an honor to be with you today.

Dr. David Jockers: Absolutely, Dr. Pete. It's an honor and a privilege for me to have you on our Fasting Transformation Summit. This is an incredible interview.

For those of you guys that are out there, I just want to leave you really with hope. Your body has this incredible dormant healing potential within you. So no matter what you may be struggling with, the power to heal is still within you. And fasting has the ability to help unlock that dormant healing potential. Fasting is safe, it's powerful, and it just might transform your life.

So hopefully you got a lot out of today's interview. Be sure to check out the entire Fasting Transformation Summit. And if you're inspired by this information, then I would be honored if you would consider owning it. Purchasing it and owning it for yourself, so you can share with others, and resource all the bonuses. All the transcripts. All the interviews. At any time.

And especially, I find that this information can be extraordinarily helpful if you are trying to do a fast, actually listening to interviews like this will empower your spirit and help you overcome hurdles that may have in the past derailed you. If you do that, we would be so honored. We'll see you on a future interview. Be blessed, everybody.

Fasting and High Performance

Guest: Dr. Isaac Jones

Dr. Jockers: Welcome, everybody, to the Fasting Transformation Summit. We are uncovering the most ancient, inexpensive and perhaps the most powerful healing tool that you can use. It's fasting. I'm your host, Dr. David Jockers. I'm really excited about today. We're talking about fasting and high performance, how you can have more energy, better mental clarity, and really get the most out of life.

I brought in the high-performance expert, my best friend, Dr. Isaac Jones. You can find him at elevays.com. He's all about elevating human performance. He and I go way back. I love his family, his wife Erica, and his three little boys. We live close to each other and are planning our lives together. This guy really optimizes high performance. Dr. Jones, welcome to the Fasting Transformation Summit.

Dr. Jones: Thank you so much David, Dr. Jockers. I really appreciate it. Thank you for all the kind words. I feel the same way. You and your family and what you're up to is amazing. The summit going to change and transform so many peoples' lives.

Dr. Jockers: Thanks so much. How did you get started in performance in general? What attracted you to that?

Dr. Jones: It's an interesting story. I grew up a really healthy kid. My parents just didn't know what they didn't know. I was eating certain foods and doing certain things, taking certain medications that really just decreased my brain function, my energy, and my vitality. I ended up getting diagnosed with ADHD and dyslexia. I was put on Adderall and

Accutane for my acne, and all these different medications.

Being on this cocktail of medications on top of the challenges I was already dealing with brought me down this spiral of even more issues like athletes' foot, chronic fungal issues, and dock problems. I would up with a stabbing pain in my gut. I discovered a doctor actually very similar to you, that helped me understand the underlying causes of what was going on in my body. I know I would've gotten faster results if I would've implemented fasting into the things I learned back then.

Needless to say, over time, this process of healing always takes time. I completely did a one-eighty. I was in such a need before to take tests because of the ADHA and dyslexia being so severe. And, literally six months later, I couldn't have even been diagnosed with dyslexia or ADHD, because of what happened.

My productivity went through the roof. I was getting straight A's in classes. In fact, it was thanks to you that I ended up applying for an academic scholarship. I ended up winning this academic scholarship. Here you go from being a kid with special needs to getting academic scholarships at doctorate level universities and different university programs, one in Canada and one in the States. That's when I started to recognize an available upgrade is possible for everyone listening right now. There is a possibility to upgrade to another level of performance, functionality, productivity, drain mental clarity and energy just through implementing a lot of the principles that we will be talking about today.

Dr. Jockers: Yes, for sure. For those of you who don't know, Isaac and I, we actually lived together through graduate school. We go way back. I saw him upgrading this physiology, just crushing his classes and all the things he was taking on. All the different clubs and skills he was looking to learn. I watched it first-hand. Let's go over some of the biggest things that people are doing wrong. Nutrition, lifestyle strategies that are hurting their energy and mental performance. Let's start with that.

Dr. Jones: When I went over this question and preparing for this interview, I didn't just want to give the same response that most people would give in an interview which is sugar, processed foods, etc. Ultimately, when I look into assessments of high performers that want to access a higher level of performance, I looked at hundreds of these at this point. One of the biggest problems is people are not eating enough fat. Not eating enough healthy fat. The other thing is that they're not eating enough high energy micro-nutrient, anti-oxidant rich foods, which we'll talk about in a second.

I'm fasting right now, but I literally had a little bit of lemon and herbs this morning and some water. I crushed it up with a mortar and pestle. And, I'm functioning at such a high level right now, through fasting. I

haven't literally eaten anything but herbs today and it's one little thing I had, some basil and sage that I crushed up and put in some water. These are little things that really make a huge difference in performance. Ultimately not eating enough fat, not getting enough of these high energy dense foods, and anti-oxidant dense foods. What comes from these surveys a lot is that people aren't drinking enough water. They're dehydrated. I know that may be something that's pretty simple, but water is a problem.

Another challenge is that they're living their life with over-producing and over-stimulating these excitatory neurotransmitters in their brain. Which really creates a decrease in brain function, impacts sleep, impacts a number of different cascades in your health and in your body. I want to talk a little bit about how to balance brain neurochemistry a little bit. But that's a big problem that we're seeing. And then people are not getting into certain lifestyle rituals that are essential for maximizing high levels of energy and performance.

And fasting and all the different types of fasting, we'll talk about later as part of that. Those are the five things I would say that are really important to look into. Again, it's not eating enough fat, it's not eating enough micro-nutrient, anti-oxidant dense, and energy producing foods. The brain chemistry being out of balance because of certain things we are doing to not balance our brain chemistry. Of course, not really getting into those rituals that we should be implementing to really skyrocket our energy performance to the next level.

Dr. Jockers: It's a great rundown and this is a really important topic. Some people they resonate with performance because they think, I'm an athlete or I've got to perform well on a test, I'm a student or something like that. Really, all of us are athletes. Most of us are occupational athletes. My wife stays home with the kids and we've got three kids. She's got to be able to perform at a really high level, so she can be fully attentive, and be a great mother to them. That's huge. She's got to be focusing on performance. The strategies you are talking about, so she can do that. No matter where we're at in life, ultimately every day we've got to be able to perform for the people around us, people we care about, and people who are depending on us. It's a really important topic. What are your top principles and top things people can start to do right away to skyrocket their energy and mental clarity?

Dr. Jones: Here's the reality. Most people create stress for themselves. They create stress for themselves in a number of different ways. This is at the core of why people continue to consume sugar. It's at the core of why people self-sabotage themselves, to actually implementing a fast in the first place. This is the number one principle, there are five actual principles I'm going to go through.

The first one is that I am going to be talking about is, presence, and I'll talk a little bit what that looks like in a second. The second is rhythms. That's exercise rhythms, sleep rhythms, different rhythms you get into throughout the day. The third is strategies around nature. The fourth is consuming real food. There are some cool strategies in there that I want to get into. And number five is technology. There is an upside and a downside to technology. I'm going to talk about both.

Getting back to stress. Stress gets created and it sabotages our health and it creates an increase in cortisol produced by our adrenals that impacts our brain chemistry because most people are thinking about the challenges of the past or unmet expectations of their future. They create stress for themselves. Now, the only way to really overcome this and access a higher level of performance, enjoyment, happiness and all of the good things of life that you want to experience more of, is to be present. Present with the moment. Present with what's happening with you right now. Present to your dress.

I was taking a bath last night and I exhaled all of the air out of my lungs and went under the water. I was under there maybe for a minute. I could hear my heartbeat. It was like meditation. I could hear my heartbeat in the water. Boom, boom, boom, boom, boom, boom. I thought, "Thank you, God, for the heart that's beating inside of me to keep me alive right now."

Even in a busy day, you can be present to what you're doing right now. Most people create stress for themselves because they're thinking, "I need to get all this done by the end of the day." Again, it's not what's happening. If you live in the world of what's happening, you don't have stress. If you live in the world of what's not happening, you always have stress.

Presence is absolutely one of the biggest upgrades you can make in creating high performance for yourself. You might think it might be a silly point, however, top-level executives are investing \$7,000 per executive to go to an event I'm going to in Los Angeles at the Ritz Carlton next week. It's a five-day event all about this one topic. I just gave you the core of it. Start observing your thoughts. Start observing where stress comes from. Become more present to what's happening and really living each moment. Recognizing what's not happening in your life is what creates the stress in your life.

If you can get present each and every day and try to that every moment of every day. You're going to create a major upgrade in your brain. Your adrenals will be at a much healthier level because you're not producing as much cortisol. Overall, you're going to digest your food better. You're going to increase micro-nutrient absorption because of that. That's was a psychological piece that I don't know if you want to add to.

Dr. Jockers: I think it goes hand-in-hand with fasting because a lot of times, especially in today's day and age, we all have our phones. It's so easy to not be present. You can spend all day long not being present. Most people do. A lot of times we think we are missing something, but really, we already have it. It's just actually taking time to slow things down and allow the mind to be clear. Fasting allows the body to really clean itself up. Presence allows your mind to just be clear and focused. It doesn't cost you anything.

Dr. Jones: It doesn't cost you anything. This is probably the number one tip nobody talks about that creates major upgrades in your health. I'll just say what creates more presence for me and my ability to stay focused on the present is fasting. I'm 100% dialed into this energy right now. My whole being. I'm so happy to be communicating with you today.

The majority of that is all the blood is in my brain. I'm talking to you right now in a fasting state. Fasting, in general, helps you create more performance in your life and allows you to enjoy each moment even more. Even when you eat later on in the day, I don't know if you get this David, but the flavors are better than when you're just eating throughout the day. You enjoy more.

Dr. Jockers: Totally. The last meals I eat in a week, the more I appreciate the meals. Last week I did a full four-day fast and coming off that, and starting to eat food, I had a greater appreciation.

Dr. Jones: There's a spiritual component that we can get into a little bit later as well. It's powerful. Presence. Number two, rhythms. There are so many rhythms we don't have enough time. We could just talk about rhythms on this call. You want to get into really good patterns before sleep. Don't eat three hours before you go to bed. Create a rhythm or a ritual before bed. Don't be watching television, be on your computer, an hour, two hours, three hours ideally before bed.

What my wife does, she likes to take a bath and read and actually not hang out with me. She's been with the kids all day. That's what she does. Which is a little challenging for me. I like to talk and hang out. We've created a good downstairs. For me, it's reading books, and doing some stretching before bed. Part of the balancing of the nerve transmitters in your brain because there are so many elevated excitatory nerve transmitters that keep us from getting deeper sleep at night.

One of the interesting things that increases GABA through just something you can do right before bed, is meditation that skyrockets GABA and stretching skyrockets GABA. I found that even two minutes of stretching helps me get a much deeper and rejuvenating sleep than if I don't stretch before bed. Stretching and meditation. Anything else you want to add, David?

Dr. Jokers: I think those are really good strategies. Yes, stretching and meditation. We have a massage chair at our house. I jump on that too. A massage, light music, light worship or light classical, something along those lines. Just really light can be good. Some positive visualization. Closing your eyes and allowing your mind to visualize what you want can be helpful as well.

Dr. Jones: Absolutely. To your point on massage. One thing I do almost every night is myofascial release. You don't need to have a massage chair. Just get a two-dollar lacrosse or tennis ball and roll around on that. Work out knots on your back, or on your gluts, or on your sides. It's amazing what just two, three, four or five minutes of that will do for your sleep.

The rituals before you go to bed are huge. Getting committed to a ritual and a rhythm through the week. I know that I'm working out specific days of the week doing yoga. I'm starting to implement getting out in nature a little bit more. It's something that really means a lot to me. I haven't actually done this well.

That brings me to the third point which is getting out in nature. This is something David and I did all the time. We'd go for runs early in the morning through the woods, and through the forests. We would get outside. Run with our bare feet on the grass. We'd take our shirts off and this was while we were getting our doctorate. We would do pushups, thrust-ups, and sprints. Out in nature, hearing the birds sing, and getting Vitamin D on our skin. You can even do that during a working day. If you're on a phone call, tell them to call your cell phone and get out, go for a walk. Get some Vitamin D. Go to a park nearby. Even if it's just indoors, walking and talking is better than just sitting and talking. Nature is extremely powerful. I try to integrate that as much as I can throughout the week. Anything else you want to add?

Dr. Jockers: I love that. Right before this interview, I went out and jogged around my neighborhood. I wanted to take a little break. I try to take three to four walks a day around my neighborhood. It really helps break things up and helps me be more productive.

Dr. Jones: Absolutely. Exactly. That's exactly what I do as well. Number four is real food. You've heard about vegetables being healthy for you. A lot of people don't emphasize spices, herbs, and these types of high energy alkalizing foods like lemons, limes and things of that nature. I typically do lemon or lime every other day. I do a lot of them. Over the last three days, I've done either a lemon or a lime. Getting some of that juice in your body alkalizes, it's high energy food. If you can, crush up or add some spices or herbs to your smoothies.

I know David loves turmeric in his smoothies. He's got some great

recipes on his website. I'm experimenting with morning mock-tails that are fasting type cocktails you would get a bar. It's water and ice and you crush up some herbs and squeeze half of a lemon in there. You're getting all these herbs and spices in the morning. It's something that doesn't spike your insulin and gives you strength like powerful micro-nutrients. That's something you may want to look into.

Let's talk about technology. Anything you want to add to real food?

Dr. Jockers: I love lemons and limes. You get this combination of Vitamin C and citrus bioflavonoids. You call citrus bioflavonoids, Vitamin P. One of the big things they do is they help relax the lining of your blood vessels, which amounts for better capillary permeability, getting more blood flow into the deep areas. Your oxygen extraction, and cellular energy production. Plus, you get potassium, magnesium, and all kinds of key electrolytes. Huge fan of lemon and lime.

Dr. Jones: It's something we'll talk about when we get to the details about fasting and how I use fasting for increasing energy and brain support. It's one of the best things you can do for vasodilation and the touching of your vessels. It's very powerful for just getting blood and oxygen to those deep areas of the brain that a lot of people are getting constricted levels. Powerful.

Technology. Here's the bad of technology. I'll talk about the bad and then I'll get to the good, in respect to energy and performance. The bad in respect to technology is that electromagnetic frequencies are everywhere. I've got my computer directly plugged into the ethernet connection. I have zero Wi-Fi in my office. My cell phone I often put in airplane mode. For my house, you can get them on Amazon, these little timers that you can time when the Wi-Fi shuts down around the house.

At night everyone is sleeping in a Wi-Fi free environment. Why is this important? You're an electrochemical being. We actually don't know the impact Wi-Fi has on people. All I know is I can actually feel high fields. There are people with deficiencies of B Vitamins that can really feel it, more so than other people like B12 and pentadic acid. These vitamins create and a heightened sense of the challenges that come with toxicity. They're linked to cancer, they're linked to heart disease, and they're linked to increased levels of inflammation.

With technology, we want to minimize it as much as we can. But we also want to use technology to increase levels of energy and brain performance. One of the things I love to do is I use this technology called brain.fm. You can use it on your computer. You download an app on your phone. Brain.fm brings your brain into a very deep state of focus and flow. It uses artificial intelligence to actually create music and binary beats to actually help you focus better when you're meditating, mediate

better and get into deeper states of meditation a lot quicker. I typically use headphones when using it.

Technology for bio-hacking or for tracking your vitals. There's technology now for ketosis that Dr. Jockers learned a lot about from his wife's side, in past interviews and summits that he's done, the Keto Edge Summit. I highly recommend getting that if you guys haven't got that yet. There are little things like the Muse device for meditation. You can pop it around your forehead and you can actually look to see if you're getting into states of meditation. One is your brain. You can gamify the approach as creating more control over your brain function and higher cognitive access to your frontal cortex through meditation. Technology is just amazing.

Those are the five things. You've got number one which is the most important, which is being present. I'll just reiterate this again. Being in a state of awareness of the things that create stress. Stress simply becomes where it's not happening. We've got to focus on what's happening and living in the moment. One of the best tips to get back to present is just breaths and doing deep belly breaths and breathing exercise is extremely powerful.

Number two is getting into rhythms. We've talked about sleep rhythms. We've talked about exercise rhythms. Number three is nature. Number four is real food and of course, number five is technology and using technology to help access higher levels of performance.

Dr. Jockers: Cool man. It's a really good run down right there and definitely a lot of stuff that other speakers aren't talking about. I love it. Let's talk about fasting. How does fasting help to clear your mind and give you better mental clarity and energy?

Dr. Jones: I work with executives and entrepreneurs around the world of the highest order. Some of these people work for billion dollar, Fortune 50 companies. Some of them are entrepreneurs with multi-million dollar vast world companies. They want an unfair competitive advantage. What's great is you don't have to be an entrepreneur or CEO to get the benefits of the things I educate them on.

In fact, one of the most important things, and the thing that really creates the highest level of performance in their bodies and in their brain in respect to energy is intermittent fasting and fasting in general. Using the multiple kinds of fasting that will help you get to a higher level of performance. What we see is increased energy. We see increased focus and brain function. They look at me like the doctor that gets them six packs. Or the doctor that gives them their ideal body. That's what happens when you fast. Over time you end up creating a hormonal balance. Your neurotransmitters have a break from the bombardment

of the challenges that you get from eating some of the other things that most Americans eat.

Most people don't know how to eat. Your body gets into a state of fat burning. You get to the point where you're rich. If you saw David Jockers with his shirt off, you'd say, "Holy cow, he's ready for a fitness competition." I see it. I'm hanging out with him on the weekends. This is a side effect of fasting. This isn't something he's training for. This isn't something I'm training for, a fitness competition.

These people they access anti-aging pathways. They look younger. I had a screenwriter in Hollywood who has written some of your favorite movies. We implemented fasting with him. He lost 100 pounds in around an eight-month process of using intermittent fasting and different fasting strategies, during working with me. People did not recognize him. People that he knew for years and that he would see months later, they did not recognize him. He'd say, "Hey it's me." He said the compliments that people would make was that he looked five to ten years younger.

This is the craziest thing. We did pre-impost telomere life tests on him, before and after the fasting program. Guess what happened? This is mind-boggling. He reversed biologically over eight years in just eight months. Eight years! I since have done this with multiple people, and the telomere lengths are mind-boggling. We're putting on, in just a short period of time, years in people's lives, biologically, in respect to the telomere length, which is an indicator of how long you're going to live.

Dr. Jockers: It's amazing. Again, it didn't cost them anything, really you just stop eating.

Dr. Jones: There's so much about fasting that's beneficial. Totally.

Dr. Jockers: Let's talk about things people can do. What are other helpful strategies they can do while they're fasting to help improve energy and mental clarity? If somebody just starts fasting and they have no experience, they may notice their energy goes down before it goes up. What are things that can help with that?

Dr. Jones: I'll tell you the same thing I tell people that are working with me. Often times our bodies have a certain level of toxic burden. Anytime you start to move those toxins out of your body, which fasting is one of the best ways to do that, you end up often times getting a little bit of a Herxheimer reaction or just a detox reaction. There are two reasons for that. Number one, you're actually moving environmental toxins out of the cells and out of the body, which is great.

Number two reason is you're starving the bio-toxins in your body. The

unhealthy micro-flora and bacteria that has overgrown over the years, which is wreaking havoc and creating inflammation in the body. When you go into a fasting state, those levels of and colonies of bacteria and perhaps even various other bio-toxins that scientists haven't even discovered yet, they end up dying because they're being starved from the sugars and carbs they're used to getting. I know this might sound interesting, when those die off, which is literally the term used in the scientific world, it's called die off. When they die off, they release endotoxins and neurotoxins, and can often times create symptoms associated with fasting.

What do you do about that? The best way to enhance fasting is to give yourself when you're first fasting, a little bit more time to sleep. If you normally sleep for six hours, give yourself seven hours. If you normally sleep for seven hours, give yourself eight hours. Your body is going to need a little bit more time to handle and detox through this process. Your liver detoxes' circadian rhythm is around 10:00 to 2:00. I would recommend getting to bed by 10:00 and making sure you're getting four hours where your liver is optimal detox. This will help with the fasting and minimize the side effects from the fasting.

A couple of other things I recommend is some people say, "I get really tired throughout the day." I recommend doing a nap in the day. If you can't take a nap, get on some of the supplements on drjockers.com. Some of the best supplements in the world that will help to boost your energy and really maintain a higher level of functionality. One thing I recommend is herbs. Getting different herbs in your diet. A lot of people aren't talking about vitamins and herbs. I use so much of it. I know Dr. Jockers uses much of it in his diet.

Recently, I have been experimenting with literally crushing up different types of herbs like mint leaves, sage leaves, oregano leaves, and basil. I have basil plants. You can get them at Whole Foods for five dollars. Organic basil plants that last a month. For me, it's like a week. You're plucking the basil leaves, grinding it up and throwing it in some water and I actually eat it. There are so many factors inside of those herbs that are so powerful for your gut microbiome, to help promote a healthy gut microbiome, but also overall healthy brain and body. It's going to help take the fast to an entirely new level.

When you're not fasting consuming micro-nutrients through the form of supplements and getting on some of the supplements Dr. Jockers talks about as well. Some of the supplements like his Keto Edge supplement line. The Keto Edge supplements are absolutely amazing and will absolutely help 100% with fasting. It's one of the best things you can do while you're fasting.

Dr. Jockers: Cool. Absolutely. The Keto Edge exogenous ketones,

especially somebody that's just getting started with fasting and they want high-level performance. Getting some pre-made ketones that mimic the same molecular structure as the ketones our body produces teaches our body how to use these ketones for energy. Not to mention, when you get ketones in the brain, whether it's exogenous, coming from the outside like in a supplement or indigenous, meaning your body produced it.

Once they get into the brain, they are going to signal BDNF, which is the Brain-Derived Neurotrophic Growth Factor which helps neuron development, synapsis little gaps in the nerve cells, and helps enhance neurotransmitters. You get immunization of serotonin and dopamine and all the things you need to be able to focus and concentrate well. It helps balance glutamates and GABA ratio, so you don't have too much excitation. You're calm. You have a better presence that way. I find that can be really helpful and use exogenous ketones are a good ketone supplement and adaptogens.

You were talking about herbs. Whether you use ashwaganda, cordyceps or weshe. These things can help our body adapt to stress. Fasting is a stressor on the body, and we need to adapt. Like exercise. If we just start and all of the sudden go out and try to run a 10K we're going to be really sore, really tired afterward. Too much stress, too quickly. It's similar to fasting. These are tools that can help us adapt faster. Let's slide into exercise. You're a fan of fasted exercise as am I. I like to work out at the peak of my fast. How does that impact us? How does that help us?

Dr. Jones: First of all, when you're fasting, and you exercise, you're going to skyrocket a fat burning, anti-aging hormone, which is considered probably the number one hormone in the body for anti-aging, called human growth hormone. HGH is like the magic pill. All the women that I've worked with who are celebrities in Hollywood, they've asked me, "Hey, can I inject this into my body?" I say, "Hey, why don't you just fast? You're injecting HGH and combining fasting with exercise."

The research shows you're entering it with men at 2,000% post-exercise, and increasing the women up to 1,500%, which is unheard of. There is a really good friend, Ben Greenfield, he fasts once a week while he works out. I fast every single time I work out. The way I feel. The benefits physiologically, it's so profound, and so powerful. You're getting the Human Growth Hormone. Ultimately, you're getting a much better clearance of a lot of the toxins inside of your body when you're exercising. You're moving the blood and you're moving your lymph's while you're fasting. It's a purifying activity.

The argument against that is you're burning calories, micro-nutrients, and you've haven't eaten. Where are you going to get the energy? You're going to bomb out if you exercise while you're fasting. Dr. Jockers and

myself, have found the exact opposite. We're actually stronger. We actually can push harder. Your body is using the glucosamine cycle or beta-oxidation to use ketones and use fat for energy. Your insulin levels are actually ideal through the process of working out and you're getting all these other benefits.

I like to give examples of some of the types of exercises that I do. I love resistance training, more functional resistance training. If I don't have very much time to train, I'll train my legs because that's where you're going to get the best bang for your buck when it comes to the hormone releases and the brain driver, the perfect factor, the HGH, the endorphin release of the high of working out. David and I are both addicted.

While working out, I literally can't stand it. I say, "How do people not work out?" When you're experiencing working out with fasting, I say, "How do people not do this?" You're even better. High-intensity interval training, I love to do. I love doing yoga when I'm fasting. Flow Yoga, I think it's called Vinyasa Yoga which is more high-intensity yoga. If I don't have any time to work out, I just do squats. I sit in my hotel room and I'll just do squats until I burn out and can't do any squats again. I'll do that three different times. It takes me four or five minutes. It's a five-minute workout.

I still get my workout in when I'm fasting, and I still get the release that I want. You don't have to necessarily go to the gym, you can just do squats without any weights. There are so many benefits to working out. I don't think the research has uncovered yet when you're in a fasting state. 90% of the time that I work out, I'm fasting.

Dr. Jockers: I love it. We look at the concept of autophagy, where the body actually breaks down old decaying cells, and utilizes the materials for new cells. The two biggest stimulators of that are some going to be sort of high-intensity exercise and fasting. When combine that you hit this profound benefit. Also, heat does.

The other day, I was doing sprints outside in the heat. I was so sweaty. I was getting all this heat impact stimulating the autophagy. I was fasting. I was exercising. All of those things will help stimulate it. A lot of herbs, like you were talking about, like lemon and lime, the Vitamin C and flavonoids will help stimulate some of that autophagy. If you handle caffeine, coffee, green tea or matcha, or something along those lines, stimulates the autophagy process.

Cycling the body through this cellular cleansing and then cellular building so you fast, you get a great workout and come back and consume a really healthy meal with high-quality protein. For example, I haven't eaten since 2:30 yesterday. It's almost 12:00 and I'm going to work out after this after 22 hours fasting. After that, I'm going to have a

really awesome, amazing protein shake.

Dr. Jones: Let me tell a quick story about that. I used to want to be a big bodybuilder. On the weekends while other doctors or students that are becoming doctors, go out and party, David and I would literally stay in and do extracurricular activities or go to a seminar.

David is similar to my wife. He reads the research. He's reading books. He's probably the most well-read clinical expert in the world on so many different topics. He loves that. Remember when you were experimenting with fasting and working out? Honestly, I was judging him. I said, "He is crazy. What is he doing? He can't build muscle that way." Over the weeks ahead he got bigger. His chest got bigger. His deltoids got bigger. I thought, "Is he doing testosterone? Is he injecting human drug hormone into his body? What's going on?" I said, "What are you doing?" He said, "I'm fasting, and I don't even eat while I'm working out."

He explained to me what he was doing. It didn't make sense to me at the time. Now, it's not like you're going to cause your body to go through rhabdomyolysis or you're eating your muscle. It actually creates a great physiology. You maintain muscle mass and have a healthy physiology and body like what was happening with David. I don't know how much muscle you gained, but I would guesstimate probably 10-15 pounds over that time of fasting.

Dr. Jockers: Absolutely. If I don't do fasting and high-intensity strength training, I'm normal body weight. I'm about 5' 11". My normal body weight is 150 pounds. With it, I maintain between 160 and 165. My strength and everything is so much better by following that. You're right I would fast somewhere between 2:30 and 4:00 and then I would eat in a four-hour eating window. Now, I do the same thing now. I usually eat my meals somewhere between 2:00 and 6:00, my eating window, two big meals between that period of time.

Dr. Jones: Exactly. I didn't know that but that's exactly what I do. I have some sort of micro-nutrient rich herb in my morning mock-tail in the morning. It's like fasting.

Dr. Jockers: You get nutrients in but nothing that's stimulates insulin.

Dr. Jones: Exactly. I'll take some supplements and I'll wait to eat until 1:30 typically. I will have my last meal around 6:00 to 6:30. What you'll find is that you start sleeping less. Waking up early is effortless. You wake up feeling refreshed. You're not starving your body. I'll eat a relatively big meal at night. It's great.

Dr. Jockers: I love it. It's such a great lifestyle to get into. This has been a powerful interview. Can you share any final words of inspiration? What

kind of things you are working on and where people can find more about you?

Dr. Jones: Thank you. Final words of inspiration are, be nice to yourself. Be kind to yourself. Love yourself. Nobody else is going to love you better than you can love you. Being present in the moment of going through a fast and being present in nature when you're out in nature. Being present with your kids when you're with your kids, or with your friends.

This is so important. I'm starting to realize the more I do research into the mindset of human beings is that a lot of us beat ourselves up. We create stress for ourselves. This is at the core of the health challenges that we are dealing with. If you can just love yourself and be more present. Live in a world of what's happening versus a world of what's not happening. You create such a power to who you are, a confidence of who you are. I want to encourage you to do that.

If you guys check me out at elevays.com, you can get access to our videos, and educational content. We are watching for retreats you can apply for all-encompassing experiential retreats. You may want to start experimenting with fasting with different types of food and nutrients through an experience. We're going to be watching that very soon and you can get on a waiting list on elevays.com.

Dr. Jockers: I'm going to have to go on one of those retreats.

Dr. Jones: Maybe we'll do one together.

Dr. Jockers: For all the listeners out there, thank you for joining us. I just want to remind you, fasting can truly unlock the door and fulfill the potential within you. It's faith, it's powerful and it just might transform your life.

10 Common Intermittent Fasting Myths

Guest: Dr. David Jockers

Dr. David Jockers: Well, welcome to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. I'm your host Dr. David Jockers.

And in this video, I'm going to go over the top 10 most common intermittent fasting myths. So these are myths that many people believe—and they're perpetuated online—about fasting. And I'm actually going to show you peer-reviewed research. So I'm going to actually show you studies right out of PubMed that talk about basically many of these myths and actually put them to the test.

So again, there are many people out there who are talking about fasting, a lot of negative words that are said about it, but really no research to back that up. I'm going to actually show you the research in how fasting can be so beneficial for somebody's health.

And so as we get started here, if you don't know me, I obviously am the host of the Fasting Transformation Summit. Doctor of natural medicine. Chiropractor. I speak all around the country. I have a clinic called Exodus Health Center in Kennesaw, Georgia, so right outside Atlanta. This is my beautiful wife Angel, my little boys David and Joshua, my little girl Joyful. David and Joshua are identical twins.

And so as we get into the top 10 intermittent fasting myths, number one is that it's unnatural and unhealthy for the body. In fact, I used to think this, too. My parents would fast for spiritual reasons growing up. And

the whole family would fast at certain times. And I always thought it was just so unnatural. It was like I thought I couldn't do anything that day. I felt awful. And I would just lie on my bed because I thought I was going to lose muscle or wither away. I just thought it was so unnatural and so unhealthy. I was just doing it, trying to muscle through it and do it for God.

But the reality is that it is healthy. And it is actually very natural. In fact, this is great study right here out of *Cell Metabolism*. This is 2014. You can see Valter Longo and Mark Mattson, two of the most famous researchers on cell biology and fasting. And you can see the abstract there and what it says. "Fasting has been practiced for millennia. But only recently, studies have shed light on its role in adaptive cellular responses that reduce oxidative damage and inflammation, optimize energy metabolism, and bolster cellular protection."

So what they're saying is that people have been fasting, really since the beginning of mankind. We just haven't had studies to prove the benefits. But now the studies are showing that it helps reduce oxidative damage and inflammation. We know oxidative stress and inflammation are the root cause in every degenerative disease. So now the studies are showing this.

Fasting helps optimize your energy. So it helps improve your metabolic flexibility, your energy efficiency. And it protects cells. So it improves overall cellular endogenous antioxidant production within the cells. So your cells' ability to produce things like glutathione and protect the DNA. So really, really powerful.

If research wasn't backing up those statements, there's no way they could get this published in a big journal like *Cellular Metabolism*. And they finish this off. And they say, "In rodents intermittent or periodic fasting protects against diabetes, cancers, heart disease, and neurodegeneration." So studies have shown. There have been enough studies that have come out that have shown that with rodents fasting helps protect against these diseases—diabetes, cancer, heart disease, neurodegeneration.

"While in humans, it helps reduce obesity, hypertension, asthma, and rheumatoid arthritis." So what that means is there just haven't been enough studies showing—and I'm going to actually show you a few. But there haven't been a whole lot of studies on people with diabetes, cancer, heart disease, neurodegeneration. But because we are seeing positive change in rodents, we can think, "Okay. This could be a really great, healthy strategy that people could apply to help protect against those."

There have been studies showing that humans using fasting, it's

obviously going to help them burn fat, lose weight. It actually helps control blood pressure, helps reduce asthma, helps reduce autoimmune conditions like rheumatoid arthritis.

And then they go on. They say, "Thus fasting has the potential to delay aging and help prevent and treat diseases while minimizing the side effects caused by chronic dietary inventions." So bad nutrition, it's going to help reduce the side effects of really bad nutrition.

So unnatural and unhealthy? Not true. It's actually very natural. We've been doing it since the beginning of mankind. And as the studies show, it's quite healthy for the body.

Now number two. "It slows down your metabolism." Most people think this. "Hey, if I fast, my metabolism is going to shut down. And then when I do eat, I'm going to end up gaining weight. I'm going to end up having a lot of weight."

Now what's true is that when you do fast, obviously you're going to lose weight. In the beginning, a lot of that weight can be water weight because your body is breaking down stored glycogen. So you're actually losing water because when it's breaking down this stored form of sugar called glycogen you will lose water because water is kept in the muscle to help with the glycogen. So glycogen brings water with it. So you will lose some water weight. And then when you start eating again, you probably will gain some of that water weight back. So there's some truth in that.

But as far as slowing down your metabolism, it's not actually true. In fact, what we know is that basically when insulin is available, your body stores body fat. When you fast, there's no more insulin available. So when insulin goes down, your body starts to use body fat for energy. So you start to break down body fat for energy.

And actually, fasting stimulates certain hormones like cortisol, norepinephrine. And it doesn't over stimulate these stress hormones, but it helps stimulate growth hormone and norepinephrine, which actually stimulate metabolism. So you actually are better at producing energy and become more energy efficient to break down body fat and convert it to energy more effectively. So it definitely doesn't slow down your metabolism.

Number three is "it causes nutrient deficiencies." So obviously, if you're not eating, the thought is, "Well, you need all these different nutrients to produce energy. If you're not eating, then you're not going to get the nutrients needed. You're going to end up with deficiencies."

Well, certainly if you're eating a really bad diet when you do eat, a

very processed-food diet, you certainly could end up with nutrient deficiencies. However, it's really all about, number one, what your body absorbs. So not just what you eat but what you actually absorb and utilize.

So you have to have a healthy gut microbiome. You have to have a healthy intestinal lining. You've got to be able to produce good stomach acid, digestive enzymes, bile in order to break down and absorb nutrients.

Now, that's one element. The other element is this. Actually, the process of digestion—when we're trying to digest food, we utilize so many of our nutrients. So we get very little net gain when we're consuming food. Then of course, if we're consuming processed foods, then we're going to actually end up with a net loss.

And so fasting actually creates more energy efficiency in our bodies. We get better at utilizing nutrients. Fasting also stimulates something called autophagy where your body breaks down these old, decaying cells. And in these older cells, you've got all these key nutrients that you need. You can reuse the enzymes which are basically made up of proteins. It's got all these different things that are necessary—so all the B vitamins, magnesium. It's got all these compounds. We just have to be able to break the cell down and be able to reuse the raw materials. And that's what fasting allows us to do.

Now, let's talk about the gut. You could see with this study here that fasting—this is out of *Cellular Stem Cell*, 2018, so a very recent study. "Fasting Activates Fatty Acid Oxidation to Enhance Intestinal Stem Cell Function During Homeostasis and Aging."

And so what this showed was that basically they took this group of rats. And they tested them. And again, it's a rat study, so it's not a human study. But there's a lot of truth to what's happening with a rat can certainly relate to what's happening with a human.

And they showed that doing a 24-hour fast augments intestinal stem cell function. So these stem cells, which are very young, new cells, are able to basically increase. And the body starts to have something called autophagy where it breaks down those old, decaying cells and utilizes the raw materials.

And so a state of fatty acid oxidation where the body is utilizing fat for fuel helps stimulate that. And so very, very interesting study. The more stem cell activation we're going to have in the intestinal lining, the more we're going to be able to rebuild the intestinal lining, the less we're going to have issues with leaky gut and chronic inflammation. So a very key study right here.

And then you can see right here, the more energy the body uses on digestion, the less energy we have for healing and repair. So it's very, very key that we are focusing on reserving our energy because the first law of thermodynamics is that energy basically cannot be created or destroyed. It's only, in a sense, shunted between different mechanisms.

And so our immune system and our cellular repair system need a lot of energy. But our digestion does too. And so when we're eating a lot of food, digestion takes priority. We get less healing, less repair, less immune activation. So when we stop eating, when we fast, our bodies can really move into healing and repair mode and start to regenerate new, healthy cells in the body.

Now number four there is "causes muscle loss." I used to be so worried about this because I've always been very thin throughout my life. And I've worked very hard to build muscle. And I'm in very good shape. And so I always thought, "Well, if I fast, I'm going to lose my muscle mass." And obviously, if you do a very long, extended fast, you certainly can.

However, the research shows this. Actually the effects—you can see it in this study right here, *Journal of Translation Medicine*, 2016. It said, "The effects of eight weeks of time-restricted feeding," which is intermittent fasting, of 16:8—so these individuals were eating during an eight-hour eating window. And so basically, they were fasting for 16, eating for eight. So let's say from 10 am to 6 pm. And they were combining it with resistance training.

And what they showed was that basically these individuals, it said they could improve—I'll read this. "Our results suggest that an intermittent fasting program in which all calories are consumed in an eight-hour window each day in conjunction with resistance training," so of course they did strength training as well, "could improve some health-related biomarkers, decrease fat mass, and maintain muscle mass in resistance-trained males."

So they're better able to burn body fat. And they saw positive changes in a lot of different risk factors including muscle mass. And so they didn't lose muscle by doing this.

This study right here, *European Journal of Sports Science*, 2017. "Time Restricted Feeding in Young Men Performing Resistance Training: A Randomized Controlled Study." So randomized, controlled study is the gold standard in the medical system as far as when it comes to studying things. It's the gold standard in western science.

And so these individuals had a four-hour eating window. So it was what I call Warrior Fast where you are basically only eating your meals in a four-hour time window. They did this four days per week for eight

weeks. So they didn't do it every day. But they did it four days per week. No restriction. We don't really know what kind of food they were eating. But they just did this fast. And they were training.

And it showed that upper and lower body strength and lower body muscular endurance increased in the control group as well as in the fasting group. "But effect sizes demonstrate greater improvements in the [time restricted feeding] group." So the group that did this sort of fast actually had better changes when it came to upper and lower body strength, lower body muscular endurance than the control group.

"Overall, the [time restricted feeding group] reduced energy intake." So they basically ate a lower amount of calories. But it "did not adversely affect [their] lean body mass retention or muscular improvements with short-term [resistance training] in young males."

So basically, again, it's saying that we're preserving lean body tissue. Basically, when we fast like this, we start producing ketones. And ketones have this really powerful effect at telling the body, "Hold on to muscle mass." If our ancestors withered away, if they lost muscle mass when they fasted, we wouldn't be here today. But because our bodies got strong, we got more energy efficient. The ketones help fuel our brain. And we felt sharper. We thought sharper. And we were more mentally clear and were more creative. We were able to be more resourceful to be able to get the food that we did eat back when food was scarce. So this makes a lot of sense.

So we're not going to lose muscle mass. And I actually do a lot of fasting. And it helps me maintain muscle mass. And actually, I feel stronger and healthier. When we're fasting, we produce a lot of this hormone called human growth hormone (HGH). HGH is what we call our quintessential anti-aging hormone. It helps us burn fat. It helps us build muscle tissue.

So fasting and then doing resistance training, that combination, really helps stimulate HGH. We get dramatic rises in human growth hormone which helps us to build muscle tissue. So we get great benefits there.

Now, "leads to eating disorders." So this is a common thing, too. People think, "Well, if I fast, I'm going to have an eating disorder." Fasting really doesn't lead to an eating disorder. If you do have an eating disorder or maybe you've had one in the past, then fasting is not for you. I would recommend making sure you're fully healed from the eating disorder whether it anorexia, bulimia, whatever it is. Make sure you're really healed, that you've done psychological work there, that you're a different person. And then you can start with intermittent fasting.

But fasting itself is not going to lead to an eating disorder. In fact, you actually notice that you have a much greater appreciation for food.

You actually enjoy it more when you are eating. You have a great appreciation for it because you just don't have food all around all the time. You're controlling your food intake. So it can be really powerful.

Now, the next one, "not good for people with diabetes." A lot of people think that. "Well, what if I have diabetes? I can't fast." And what we've got to understand is that there's a difference in the different types of diabetes.

So there's type 1 diabetes. And type 1 diabetes, these individuals can't produce insulin. And therefore, they have to inject insulin. For those individuals, fasting can be dangerous. And they've got to really be careful there.

So there are people who are type 1 diabetics who do intermittent fasting. But they do it really with help, with a trained clinician who knows how to work with them. They're testing their blood sugar, their insulin. They're really teaching their bodies how to do it properly. And so type 1 diabetes, I don't recommend just jumping into fasting.

Whereas type 2 diabetes, it's been shown to be quite safe. In fact, this is a study from *World Journal of Diabetes*, April of 2017. It says, "The Effects of Intermittent Fasting on Health Markers in Those with Type 2 Diabetes: A Pilot Study." So basically, a pilot study is like a test study to see if this is something we should put more money and energy into to do a more long term study.

It says, "The results from this pilot study indicate that short-term daily [intermittent fasting] may be a safe, tolerable, dietary intervention in [type 2 diabetes] patients that may improve key outcomes including body weight, fasting glucose," so fasting glucose came down, "postprandial variability." Meaning that post meal. Some people have their blood sugar go way up. Sometimes they go way down because they have reactive hypoglycemia. So this showed that it created more stability in their blood sugar after meals when they did eat.

It says, "These findings should be viewed as exploratory, and a larger, longer study is necessary to corroborate these findings."

"Intermittent fasting was well tolerated in the majority of individuals with 6/10 participants," so 60%, "stating they would continue with [intermittent fasting]—" And by the way, what they did was they had these individuals for two weeks do a 16 to 20 hour fast. So between 16 and hours. So basically, it was well tolerated. Six out of 10 said they wanted to continue it after the study. They didn't know the benefits. They just felt like, "Oh, I like this. And so I'll continue to do it." Six out of 10.

And let's see. Yep, so basically what that's telling us is that it's quite safe. And of course, they say we need a longer study on this. Absolutely. Just a pilot study. But certainly, it was safe here. So we don't need to be overly, overly concerned about doing it with diabetes.

Here's another study. October 2017. "Effects of a One Week Fasting Therapy in Patients with Type 2 Diabetes and Metabolic Syndrome: A Randomized Controlled Exploratory Study." So again, this is a big study right here.

And what it says there is that fasting was performed with a nutritional energy intake of 300 calories a day. So that's less than 25% of our calorie needs which therefore, in the scientific world, makes it a fast because a fast in the scientific world is less than 25% of your calorie intake. So that's what these people did. And the calories they did consume had to be by liquids only.

Now, they didn't say if it was a fat fast, if they were given coffee with butter or anything like that. They just gave them calories. So maybe they gave them an Ensure shake or something, something with sugar. We don't know. And most likely, that's what they did. And I wasn't able to find in the study what they actually gave them. But they were limited to 300 calories a day. And they had a stepwise reintroduction of solid food thereafter.

Outcomes were assessed. So they assessed them at baseline and then after four months. Okay. So they did a week, one week of fasting in that four month period of time. "Of 46 enrolled participants—" they had 46 people—"32 of them completed the trial and were included for final analysis." So pretty good as far as the overall compliance, roughly two-thirds.

"Fasting was well accepted. There were no serious adverse events." So this is a weeklong fast. So this is more than just intermittent fasting. This is a weeklong fast with 300 calories or less.

"Results of this study suggest that prolonged fasting is feasible and might have beneficial clinical effects. The effectiveness of fasting should be proved in larger confirmatory trials that include intermittent fasting in follow-ups to enable more pronounced and long-term effects." So we're on to something here.

These were newer studies. Now, there are several studies that are in the works here that are going on because we're seeing results. So is it not good for people with diabetes? Type 1 diabetes need to be careful. Type 2 is perfectly safe.

Now, does it encourage overeating when you're fasting, like binge

eating? And the truth to this is if you're doing the fasting right, it really doesn't. Okay, now you're going to eat until you're satiated. So the studies show that the individuals don't end up overeating when they do eat.

If you were to eat one meal a day—and there are a lot of people who do that. It's called OMAD (one meal a day). You typically are eating a little bit fewer calories than if you were to eat two to three to four meals a day like most Americans are doing—typically three plus. You're actually eating a little bit fewer calories.

But your body is more efficient. You preserve lean body mass. You are leaner as far as burning body fat. And you become more efficient. So you don't need quite as many calories. Your body is able to run really well on what it has. And that's typically what that shows.

However, that one meal that you eat is significantly larger typically than if you were to eat three meals in a day, which makes sense because you're trying to get a lot of the calories in that one meal or, if there are two meals, in two meals.

So does it encourage overeating? Maybe slightly to some degree. But it's not really encouraging massive binge eating that's unhealthy and unsafe. That's what we need to understand.

Now, the next one is "you shouldn't exercise while you're fasting." And this is definitely not true. Now, when you first get started with fasting, doing intermittent fasting, things like that, you're not going to feel really strong.

It's like exercise. So in the beginning when you first exercise, it's going to be very uncomfortable. You might be sore. You might need to take several days between workouts to recover. That's normal. It's part of the beginning process when you exercise.

So it's the same thing with fasting. If you're new to fasting and you try to exercise and you've just done a 16 hour fast for the first time ever, you may not feel good when you're exercising. However, your body will recover and adapt.

And actually, there are tremendous health benefits. And so we know that fasted exercise, when you're fasted beyond 14 hours, no calories, that you actually improve your fat burning and significantly increase growth hormone production because exercise naturally increases growth hormone. It increases mitochondria. It improves fat burning. It improves muscle growth and development.

And you combine that with fasting where you get this big rise in growth

hormone and other hormones that are associated with preserving muscle tissue and burning fat. And then you feel the incredible benefits of it.

I personally will only work out fasted. I only work out fasted. And I work out at the peak of my fast. So the peak of your fast is considered some point in the last four hours before you finish the fast and you eat a meal.

So typically for me, I might eat dinner, let's say finish dinner by 6 pm. And I might be working out the next day at 1 pm. And then I finish my workout. And then I have lunch at 2, 2:30 or something along those lines. So I'm doing an 18, 19 hour fast. And I'm hitting the weights hard.

Sometimes I do 24 hour fasts like tomorrow. So I haven't eaten since lunch today. I'm actually doing this presentation later in the evening. And I won't work out until probably 1 o'clock tomorrow. And then I will break the fast at roughly 2. So it'll be a full 24 hour fast. I'll work out. I'll feel great. High intensity strength training. And then on top of that, I'll typically wait about a half hour after my workout before I eat to get an even greater rise in human growth hormone.

And the reality is I won't even be that overly hungry. Part of me will have a desire to eat. But it's not like I'm ravenous and starving and I have to eat. And so that's really the cool thing there.

Now, here are the guidelines for fasted exercise. Number one, make sure you're well hydrated. Definitely always want to be well hydrated before any sort of exercise, particularly fasted exercise. You may also need a little bit of salt just for some electrolytes.

I don't recommend really long-term exercise, like two-hour training sessions. Probably not a good idea. I would recommend doing short, high intensity workouts, 30 minutes or less. So that way, you're not oversteering, overwhelming your system.

And then you could consume a high-quality protein or branch chain amino acids directly after your workout or maybe 30, 60 minutes after the workout if you're into a deep fast, especially if you want to really build muscle. If your goal is fat loss, you could actually fast several hours after your workout to get more growth hormone and stimulate more fat burning. But if you're trying to really preserve and build muscle, then having some branch chain amino acids afterwards can be very helpful for that to get the body into stimulating a little bit of anabolic mode to build up the muscle tissue after that fasted workout. So that can be really, really helpful there.

Oh, I wanted to finish up. So the other myths. "You will feel starved and irritable, and it will cause food cravings." These go hand in hand. Yeah, in

the beginning, you will because you haven't built up a fasting muscle.

It's like saying, "Well, walking on the treadmill or something like that is really painful." Well, it's not. But if you're sedentary, for certain individuals, it can be. Certain individuals, any form of exercise can be really, really hard for them. Whereas once you're trained, it's pretty easy. And it's quite enjoyable for people who are well trained. They typically enjoy exercise and feel great afterwards and recover well.

But when you start fasting, you are going to be feeling like you're starving. There's a big difference between starving and feeling hungry or fasting. Starving is when your food is being restricted. And you don't have an option with that. So it's not intentional. Whereas fasting is more of an intentional restriction of food.

And so we can go very long periods of time without food. So you're not truly starving. You're just hungry. Your body is just having a hunger wave. And you're irritable because your body is not good at burning fat for fuel. You're having hypoglycemia. Your blood sugar is dropping down. Your body is releasing stress hormones, getting you primed and ready to try to kill something to eat.

But the reality is that your body will adapt. And over time, it will say, "Okay. I'm going to get into this body fat. And I'll start breaking that down for fuel." And then your level of starvation and hunger and your food cravings will go down significantly. You'll feel a lot better.

So 12 benefits of a fasting lifestyle. I have a whole presentation on this. But fasting is amazing because it's going to stimulate fat burning. Your body, instead of eating the food on your plate, is going to eat the body fat that you have on your belly, on your butt, wherever it is that you're wanting to burn fat.

Or even a very lean person like me, I'm 8% body fat. You can see my six pack, every striation. I still have plenty of fat to use for energy. And so my body is just getting in there. It's using that for its meal.

That improves your energy levels. Your body produces more mitochondria. So you get this mitochondrial biogenesis. That's where you produce energy, in the mitochondria. So you get better energy production. You're utilizing ketones as a fuel source which is a really clean energy source. Ketones, you actually produce a lot more energy than when you're breaking glucose and a lot less metabolic waste.

Oxidative stress and inflammation go down significantly. So you have a big reduction in inflammation. That's going to reduce your risk of chronic disease because chronic disease is associated with chronic inflammation.

It's also going to take significant stress off the gut. We talked about that. It's going to help with healing and repair in your gut. It's going to help weed out your microbiome, get rid of some of the bad guys that are in there and just allow the gut to heal.

It's going to stimulate cellular autophagy where your body breaks down older cells, takes the raw materials, and uses those to form new, healthier cells.

It improves genetic re mechanisms. So there are certain genes in our bodies that help with increasing repair within a cell. And when we fast, our bodies stimulate these genes. And so they start to basically heal mitochondria that may be damaged; DNA, genes that are damaged; different organelles within the cell that are damaged; different whole tissues. So if you've had kidney damage, for example, or liver damage, your body is going to start healing and repairing that. Maybe you had disk degeneration, where the disk themselves in your spine were damaged, or you have a meniscus tear or whatever it is. The body is going to stimulate mechanisms that will heal, repair those things, actually doing this naturally.

And so one way it does that is it stimulates development of stem cells, so these new baby cells that have a remarkable ability and remarkable resilience to stress. And so basically, you think about a baby. A baby or a young child has tons of stem cells. So they can get hurt. And their wounds heal really, really fast because these stem cells are very, very fast at healing. They're like baby cells. And that's what we want. Most people are loaded up with old, damaged, and decaying cells. We want to get rid of those. We want to reuse those and form new, healthy, younger cells. And that's going to have an anti-aging effect.

It helps improve insulin sensitivity. So hormone optimization is key. When we have to produce a lot of insulin because our cells are resistant to it, then we end up promoting more fat gain. So insulin is a fat storage hormone. And on top of that, it promotes more inflammation, drives up inflammatory gene pathways, things like the inflammasome which is a whole bunch of different proteins associated with amplifying the message of inflammation throughout the body.

Obviously we talked about if we keep inflammation down, we reduce chronic disease risk.

It also improves our relationship with food. That's a big thing I've noticed with fasting. I just have a greater appreciation for my meals. I really just look at food differently. I appreciate it. I enjoy the flavor more. I just feel more mature in the way that I approach food at this point in my life. Fasting has really helped me with that. Enhanced mental health. This is really probably one of the most

important reasons for a younger person like myself to fast. I want to make sure that I'm performing at a really high level. I'm a husband. I'm a father. I'm a doctor. I'm a business owner. I'm performing all the time, doing presentations like this. I've got to really be on my A game. Fasting really helps me with that, living this fasting lifestyle.

And then spiritual growth and fine-tuned intuition. So I just feel more connected and more responsive to the leadings of the Holy Spirit. I'm a Christian. And so I feel led by the Holy Spirit. And particularly when I'm fasting, I feel more responsive to it.

If you're not a Christian, you're not familiar with that terminology, you may say something like, "Well, intuition. I feel like I'm intuitively making better decisions in my life." And so you may notice that as you're fasting.

And so just incredible benefits to it. And that's why we do it.

Now, how do you get started? Well, I recommend a Simple Fast to start. It's simple and easy. That's why it's called a Simple Fast. So you go 12 hours between your last meal and your first meal. So if you finish dinner by 7 pm, you don't snack at night. You don't eat breakfast until 7 am. So you avoid calories until at least 7 am. You could drink water or herbal tea or something like that.

When you wake up in the morning, you drink 8 to 16 or more ounces of water. It's the first thing you do. Overnight, we're naturally going to be dehydrated. We're breathing out water vapor. Basically every breath we're losing water vapor. So we're dehydrated when we wake up. We hydrate the body.

That hydration also helps fill up the stomach which reduces this hormone called ghrelin. Ghrelin comes out to basically make our stomach growl. So when our stomach is empty, we produce ghrelin. Our stomach growls. We want to eat. We drink the water. It reduces the ghrelin. We don't feel quite that same hunger wave. We're able to suppress it, go longer without food.

The benefits. It's going to help you sleep and heal better overnight, allows the liver to cleanse the bloodstream, really reduces food cravings and addictions. A lot of people are eating foods they are really craving and addicted to like sugary foods, things like that late at night. So it can reduce that. It helps the body to burn body fat for fuel.

So then you can move it up to the Strong Fast. I actually have an approach in the Fasting Transformation Summit Quick Start where we will go to a Brunch Fast and then eventually a Strong Fast which is a 16-hour fast.

This is where you may eat an eating window between, let's say, 12 and 6 pm, 16 to 18-hour fast. I do this pretty much every day, either a 24-hour fast or a Strong Fast, like an 18-hour fast.

And you can see. Basically, you're eating in the fasting window. Outside the fasting window, you're drinking water. You're working. You're doing things that keep you busy. Or maybe even you're resting. But you're doing your best to avoid food. And when you do this, you're going to naturally produce a little bit ketones because the body has really got to get in and break down the body fat more effectively when you start getting into this Strong Fast in that window.

Now, weekly intermittent fasting strategies. Again, this is a fasting lifestyle. So a big thing that I've recommended for a lot of people, especially people with chronic pain, autoimmune conditions, things like that, is a 24-hour fast once per week. So it's like dinner Saturday to dinner Sunday. You're drinking water, herbal tea, doing some salts.

If you really wanted to, you could do a fat fast where you're doing a little bit of organic coffee with butter and MCT oil or something like that. You could exogenous ketones to help you with energy during that period of time. But you're not consuming a significant amount of calories and certainly not more than 25% of your calories, roughly 400 to 600. You wouldn't be consuming more than that during that period. You're going to get great benefits from doing that.

Another good strategy is a 5:2 fast where you're doing five days of eating, two days where you're not eating or at least not for 24 hours. So it's like two 24 hours fasts. Or some people will do it where they finish dinner Sunday night. They don't eat until lunch on Tuesday, for example. So extending it out like a 40-hour fast.

Typically, with a 5:2 you're doing it on different days. So you might fast through Monday. And then you might fast through Thursday, for example. So it's not consecutive days. It's broken up.

And then when you eat, you eat until satiated. So again, when you do eat, you're typically eating more calories than you're used to. But overall throughout the week, it's typically a lower calorie intake. Your body gets more energy efficient. It gets very efficient with the energy that you're providing it.

And then there's Alternate Day Fasting where it's like, "Okay. I eat Monday. I don't eat Tuesday. I eat Wednesday. I don't eat Thursday. I eat Friday. I don't eat Saturday." So it's just basically fasting every other day. When you do that, you really, really, really boost your fasting muscles. I know for myself I do typically two to three 24-hour fasts every week. I'm very lean. So I'm not trying to lose weight here. But I feel like my fasting

muscles are so strong when I'm doing this.

And so today is Wednesday. I just did one meal. And again, I won't eat until lunch time today. I won't eat until lunch time tomorrow. And so that's something I regularly do. And I just feel like fasting has become so much easier now because I'm doing this regularly. So I'm really fit in my fasting lifestyle. And that's where the benefit of some of these things can be.

And the cool thing is I'm not losing muscle mass. I actually feel like I'm performing at my very best. My energy is at its very best.

Now, a lot of people have questions about prolonged fasting. When you do a very long fast of four or more days, there can be tremendous benefits. You get a higher level of ketone production. Typically, if you're doing a 24-hour fast, you're going to get your ketones. A 16 to 18-hour fast, you're going to get your ketones to 0.5 or more if you're following a ketogenic diet as well and using things like MCT oil and exogenous ketones and stuff like that. But you'll be a very mild level of nutritional ketosis.

Start doing the 24-hour fast; you're going to see it bumping it up, 1.5, 2.0 on a regular basis. I love that. I just feel so good in that range.

When you start fasting for several days in a row, you're going to get a really deep sit of ketosis. I've been up around 4.5, 5 millimole of ketones, doing a long, extended fast. A lot of people notice that. And it definitely hits your brain in a different way. That's for sure. And so this can be some of the benefits that come with it. You get a deeper level of autophagy.

Cell reproduction significantly slows down. So people who are worried about that, like people, for example, with eczema (fast cell reproduction in the skin) or people with cancer (increased cell reproduction). So it really slows down when you're doing these deep, long fasts.

And then you increase the stem cell production. So you're breaking down the old, decaying cells. You're building up new, very young, healthy cells when you're doing this. And you're slowing down the overall cell reproduction process.

So really great benefits. And you can also stack some different two or three-day fasts each week and get a lot of these benefits as well because you're building up the fasting muscle.

So you guys will see a lot of other presentations in this summit that go into more detail on extended fasts and a lot of the things that we discussed in this presentation. So again, hopefully this was a great

presentation for you.

And I just want to remind you guys—and you guys have learned it in this summit. Fasting has the ability to unlock the dormant healing potential within you. It is safe. It's effective. And it just might transform your life. So be blessed, guys. See you on another presentation.

Essential Oils for Fasting Success

Guest: Dr. Eric Zielinski

Dr. Jockers: Well, hey, everybody. Welcome to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. And I'm your host, Dr. David Jockers. And really excited to have my good friend, my buddy, Dr. Eric Zielinski, on today. He is an expert when it comes to essential oils, just all around superstar guy, has four beautiful children, great wife, Sabrina. And you know, he's a bestselling author as well, of *Healing with Essential Oils*. Is that correct?

Dr. Zielinski: The Healing Power of Essential Oils.

Dr. Jockers: The Healing Power of Essential Oils, that's right. So, fantastic book. Essential oils are a huge topic and they can be extremely helpful when it comes to fasting. So we'll talk more about that. You can check out his website as well, natural living family, right? That's correct, naturallivingfamily.com. And we'll talk more about that at the end, but fantastic website as well for non-branded essential oil education, as well as biblical education as well. And so, Dr. Eric, thanks so much for joining us on the Fasting Transformation Summit.

Dr. Zielinski: Well, it's an honor, doc. And it's kind of full circle, you know, I wouldn't be here if it weren't for you. I mean, truthfully, when we met 10 and a half years ago, and you encouraged me to become a chiropractor; that really planted a seed in my life that has manifested to where we are today. And I've implemented intermittent fasting, and you've influenced me in a lot of ways, as a friend, as a health mentor in so many areas. So it's great that we can come here and chat about this.

Dr. Jockers: Absolutely. And, you know, we do go way back. And so I knew you before you got into the health field, but you were already kind of in the health field at that time because you were practicing a lot of these principles.

Dr. Zielinski: Oh yeah.

Dr. Jockers: And so I'd love for you to share your story and really how you got turned on to natural health.

Dr. Zielinski: I mean, when I met you, we were actually on vacation. My wife and I went down to Atlanta every year to spend some time with my mentor who is your mentor, Enoch. 76 years young, not on any medications, can still run circles around all of us. But at that time, I was fasting every Monday. That was something that I just did as a spiritual exercise. I would normally do two, three, four or five, sometimes days, plus water fasts, depending on, you know, where I was in my life, detoxing, seeking out God's will. But that was just it. I did my best, right?

And I was in the finance industry and when we met and I remember going to one of your health talks, I was like, "Wow, there is more than just isolated chiropractic, isolated nutrition, isolated supplements." You've brought it all together. And we just literally packed up, three months after meeting you, three months after our trip to Georgia, Mama Z and I, with our little baby girl, Esther, at the time, we packed up; quit my job, and moved down to Atlanta to study chiropractic.

And fast forward, here we are. Well, how did I go from chiropractic, fasting, knowing a little bit about nutrition, supplements, to now being the essential oil guy? You know what, God just had a different plan for me. And one of my clients commissioned me to write a series of public health reports on essential oils. And that started my journey. So five years ago, to the day actually, when this is launching, five years ago, in May 2015, my Essential Oils Revolution Summit came out; 160,000 plus people. And here we are, and I'm just blessed and fortunate to be able to share this information with everyone.

Dr. Jockers: Oh, that's awesome. And obviously, you did a lot of work with research and public health when you were going through school. And, you know, you came across essential oils and you started writing about them. And what did you discover about essential oils? Let's talk a little bit about that.

Dr. Zielinski: I mean, they're the missing link for me. You see, like you, I mean, you didn't use essential oils early on in your healing story, did you?

Dr. Jockers: It was kind of on and off. I just didn't know much about

them. People had introduced them. You know when you're in a natural health world, essential oil is just around, right?

Dr. Zielinski: They keep on coming back.

Dr. Jockers: Yeah, exactly.

Dr. Zielinski: When I got radically born again, saved, I met Christ in 2003, I had depression; I had suicidal thoughts, chronic pain, cystic acne, gut issues. Enoch really mentored me to use nutrition and fasting and prayer, and some minor supplementation to really bring healing in my life. And you know, a little bit of aromatherapy and like, my body care products, but what really got me was my medicine cabinet. I didn't have anything for those issues. Like, I remember getting athlete's foot one year, and I was like, "Where did this come from?" And I went online and I was like, "Okay, well what can I get?" and I couldn't figure out, like, no herbal remedy worked for me. Nutrition didn't heal athlete's foot.

A bruise, you know, an abrasion, infection, something like that. And so I recognized there was a hole in my life. And then it was like, "What happens if...?" When Esther got her first 104 temperature, I saw what Sabrina did, it blew my mind. She got peppermint and orange essential oil, diluted it with some coconut oil, and she was a baby, like a year old, and massaged her back with those oils and her 104 temperature literally went away within minutes. And so I saw that because as you know, most people would freak out, take the kid to the urgent care.

They would do God knows what with them, probably put them on an antibiotic. At 104, they might even do some kind of intravenous intervention, hydrate them, whatever they would do. We didn't do any of that. And so that really opened up my mind, like, "Okay, I need this." But it was more than that. Like, "Okay, now that I started using essential oils and filling it up for our medicine cabinet," I was like, "What other areas can essential oils enhance my life?" And just piece by piece, by piece, it's been a wonderful journey. And everything from our body care to our cleaning products, to, of course, our medicine, but how we enhance our food and other things.

Like, what we're going to talk about today, how to really cap into and tap into the cravings and the leptin and the ghrelin. And how to tap into your addiction cascade, like how to free yourself; mood boosting. It's like, the sky's the limit. But here's something everyone needs to know about essential oils, is there's nothing foo-foo about this. I mean, this is the question and the concern that I get from people, is like, "It's not studied, it's not evaluated." First; that is 100% wrong. And we know more and more, and more studies are not only being done, but thousands have been conducted. Yes, and this is true, a majority of them are in vitro, cells in a petri dish, but we have loads and hundreds, literally

hundreds, if not thousands at this point, of animal trials and human trials.

So in the scientific community... and this is very pertinent because Gwyneth Paltrow... I mean, this is hot news right now and I know this is going to air at different times when people watch this, but have you heard of her new Netflix documentary series, Goop?

Dr. Jockers: Yeah, yeah I have.

Dr. Zielinski: It's like she's being like witch hunted. She's been crucified for what happened. And the thing about it is, you look at the scathing rebukes about what happened with Gwyneth Paltrow and the alternative therapies that she's promoting; well, because Gwyneth Paltrow has promoted that depression can be remedied by essential oils, you'll see essential oils being bastardized in these... New York, I just read it, New York Times. I'm just reading it in the Wall Street Journal. So, essential oils are being clumped as pseudo medicine still, and it's 2020. It doesn't make sense to me.

So, what people need to realize is that the chemical structures that chemists, that pharmacists create for their drugs are not invented in a vacuum. It's not like Dr. So and So has a dream and a vision. Like, "Okay, let's combine this carbon and that nitrogen together, and let's create this drug." No. The chemical structures that they're basing their pharmaceuticals that you and me, everyone have been... they're trying to push down our throats are based off of the chemicals in plants.

The best example is aspirin. So, willow bark, willow tree has methyl salicylate, it has a very powerful anti-pain relieving analgesic property. And so when you extract that and when you manufacture it synthetically, put a white shiny pill on it, it's called aspirin. And we see that with chemotherapy drugs, blood pressure medications; everything. So the reality is, I'm proposing to people that we go to nature first instead of going to pharmacy first. And then thank God for doctors for emergency situations. But that kind of puts everything full circle because before the advent of the antibiotic and aspirin, and drugs, people were using essential oils and essential oil based products forever.

Dr. Jockers: Yeah, absolutely. And you know, I've heard essential oils being called the blood of the plant, kind of life giving force of the plant. So, can you elaborate a little bit more on that?

Dr. Zielinski: Yeah, you know, there's actually a verse in the Bible, Revelation 22:2 that says the leaves of the trees are for the healing of the nation. I can think of no better substance on the planet that epitomizes that than the essential oil. I mean, the essential oil is what God gave the plant to heal the plant, to ward off vectors. I mean,

they're antimicrobial, antiviral, antibacterial, antifungal, they're rich in antioxidants. See, essential oils are actually bioactive compounds, very much similar to polyphenols and carotenoids, and they're just rich in antioxidants and healing properties. And so this is, you'd call it the lifeblood of the plant.

But it was really the self-healing mechanism that God gave the plant because plants don't have an immune system. You can actually look at essential oils as the immune system, the protection for the plant, and when you steam distill this plant material... and it's a lot of plant material, y'all. And I think we need to remember that essential oils need to be used carefully. Like you're not going to go to your pharmacy and get a bottle of aspirin and just take a handful because you're going to hopefully read the instructions and dosing first.

Essential oils are very concentrated and our bodies really have not been designed by God to interact with them in its pure, unadulterated form. You've got to dilute them because it takes about roughly three to five pounds... think about how heavy that is, three to five pounds of lavender flowers to get one itty bitty bottle of lavender. That's a lot of plant matter. And with that said, though, they're natural insofar as they're extracted from plants, but they're very man made.

I mean, going back to lavender, and you've been to our home, doc, you're not going to go see in Sabrina's herb garden, a pool of essential oils, you know. It doesn't exist in nature, you have to steam distill them or cold press them, or extract them with CO2. So anyway, they're very potent. They're very useful. And if you're trying to tap into what we're going to talk about, fasting and feasting and curbing hunger, and balancing blood pressure, do it carefully and really follow the advice you're going to get today because it'll be safe.

Dr. Jockers: Yeah, absolutely, really important notes there. So, you know, when people start fasting, whether it's intermittent fasting and just restricting their feeding window or if they're trying an extended fast, sometimes they experience things like cravings, right? That's a common one. Another one would be anxiety and trouble sleeping. Let's talk about some oils that can help with those things.

Dr. Zielinski: Yeah, and you know, I'm curious if you can even explain too, in your opinion, the cravings. Is it, we're talking typically sugar?

Dr. Jockers: Well, not necessarily sugar, really just to eat. Sometimes sugar can absolutely be an issue but really just the desire to eat, obviously. So yeah, sugar or just, you know, a desire to eat. Starch oftentimes can be another craving.

Dr. Zielinski: Okay, let's hit the sugar thing and then we can even talk

about just being hungry in general because essential oils can help you feel satiated or feel full. But when it comes to the craving, oftentimes, at least when I've fasted, you know, the next thing you know, in the middle of the night or you know, if I'm watching a movie with my wife, I'm craving like cereal or something like a super high carb. You know, if you have a sweet tooth and if that's something that you've struggled with in your life, you can use essential oils to balance your blood sugar. And that's something that we've actually seen lower blood sugar. Oils like cinnamon bark are extremely effective and it just takes a couple drops, like one or two drops in a gel capsule with some olive oil that you can consume once a day.

I love my matcha green tea latte. And I love putting a drop of cinnamon in there. I love putting a drop of peppermint in there. Peppermint has this uncanny ability to make you feel full. It helps you feel satiated. It actually increases your VO2 max and gives you more respiratory support, and it gives you more energy. Essential oils like citrus essential oils can actually help you increase your mood and a lot of people don't realize that maybe they're craving food because their mood might be down. And so again, it all goes down to like the, "Why?" Is it the sugar? Is it the moon? Is it just because you're hungry? I mean, there's only so much you could do when you're hungry, drink a little more water. You know, that's important.

But the reality is, if you can kind of dial in to the why, and a lot of folks comfort eat, a lot of folks eat as an automatic response to a stress. And I'm telling you, when you fast and I've seen this time and time again, especially when you fast for spiritual things... you know, like the Bible is really clear. If you want to tug on God's heartstrings, for example, you fast. Like, there's a verse that says, "If my people who are called by my name, shall humble themselves and pray, seek my face and turn from their sin..." God says, "I'll hear from Heaven, forgive their sin and heal their land." Like, how more effective of a strategy than fasting is there to humble yourself?

There's something about feeling ultimately human and weak, and getting to the point where you really come to the end of yourself. And ultimately, if someone is doing a spiritual fast, you know, putting things together in their life to help them move forward, so they don't feel like they need to break it is very important. And so, there's definitely that spiritual component because to me, that helps drive through a lot of the cravings, a lot of the hungers. Like, you know, "I'm giving this to God." A lot of churches at the beginning of the year do what's called a Daniel fast. It's like three weeks, they'll juice or whatever, they'll go on a diet or some people, you know, will do a water fast a couple times a week. To me, that's really the secret.

And then, if you're doing a fast and if you're intermittent fasting, if you

really find yourself struggling, you know, I really am encouraging people to flip the switch, in a sense. Don't make it all about the physical because I think there's a point where you're going to find an end to yourself and that's the point of surrender. That's the point where we're like, "God, I'm really craving this. I really want something. Help me." You're not going to die if you don't eat for a day but you'll feel like it. Three days, that's fine.

But the thing is, I want to encourage everyone, myself included, to kind of look. Like, "Okay, what are those things and why?" And if it is an emotional thing, if it's you being triggered by stress or anxiety, then that's where some essential oils... again, going back to the citrus oils, can really help and help you get into a better frame of mind. You know, we call it 'hangry'. People get angry when they're hungry. Like that's not a good thing, that's not natural. You shouldn't really be 'hangry'. That's a trigger in your life that... you know, why? But what if you could use some essential oils and diffuse some of the citrus, like orange, lime, lemon; bergamot?

Some people dealing with anxiety or panic. And the reason I mention this is because if you're going to be fasting for spiritual purposes, I'll pretty much guarantee you, the devil is going to come at you in a way that's going to try to derail you. I've seen this time and time again. Right before your breakthrough, right before like God said, "I'll heal your land." What land are you looking to be healed for? And I know, we're talking about the Fasting Summit here and this is about transforming your life. And so, what does that look like? You know, what does your marriage look like? What do your finances, what does your career, what does your health look like? Like, what is it that you're looking for God to heal you?

And I know the enemy of our souls doesn't want us to experience those things. And so invariably, every time I fast, every time I do something, something will happen. You know, there'll be an excuse where, you know, there'll be like a blowout between me and Sabrina or someone will get upset or something happens to the kids or something happens at work or something, whatever. There's all these distractions, but having something that grounds you and see, that's what essential oils do; unlike anything else because of the trigger of the olfactory system. It's the only system in your body that directly affects your limbic system, your brain, your memory, your mood, your emotions.

So if you could get yourself to a place where you can center, be grounded, and whatever the oil is, we can kind of go through a couple different ones. But again, the citrus oils are ones we always start with, because those are proven antidepressants, anti-anxiety solutions. But it could be something else, it could be different kind of agitation. It could be PTSD, it could be a lot of things that are triggering. But having that grounding moment... and that's where folks sometimes go

to frankincense, they go to myrrh, they go to cedar wood, they go to [Buddha] wood, they go to sandalwood. Again, notice the woods, the resins, they're really earthy tone type of essential oils. Help clear away distractions, even vetiver has been shown to help children with ADHD and ADD perform better at school.

Like, imagine you can kind of clear some of the distractions to just get back to planet earth for a minute. And then breathe and think and pray, and meditate. See, these are the things and this is where, I don't want to say the magic happens but it's kind of where everything just comes together. And having something at your disposal that you can go to in a jiffy, it's so key. And it really takes some practice. It takes some trial and error. One thing, if you do like citrus oils like myself, a blend that you might want to consider would be lime and bergamot. Both have been shown to help people with panic attacks and anxiety, and stress, they're both mood lifting.

And believe it or not, both in all sectors oils help trigger the body to burn fat, known as lipolysis. Just by inhaling essential oils, your body starts to trigger, like there's a reason for that. There's a reason where in your brain, your body gets to the point where, with the proper hormones being released, the dopamine and the serotonin, the body is like, "Okay, we can burn some fat here. We're not in this fight or flight mode." It's like, "We can start to rest and digest," getting you in that parasympathetic mindset. Those oils might help. So just equal blends. A couple drops of bergamot, a couple drops of lime in your diffuser, same thing, equal portions in an aromatherapy inhaler. You can make a body oil, like, whatever it is; I would say start with that. There's so many.

Dr. Jockers: That's great. And you know, citrus and bergamot actually also help the autophagy process, the cell death process, right? So they actually enhance that too. And you're right, so many people... you know, eating is, in a sense, it's like a drug. We get a natural serotonin dopamine hit that makes us feel good. And this is important, this is one of the drivers for why we do eat, for that emotional high that we get. And when we take food away, we no longer get that bump, and oftentimes, our body's craving it and we can really get locked in on this idea that hey, we need that bump because those neurotransmitters go down.

So by doing something like diffusing citrus, lime, you know, orange, you know, things like that, we can get, you know, not quite the same spike that we're going to get when we eat but we're going to get a little bit of a lift. And just that little bit of a lift, along with, you know, re-centering your mind, your spirit, can help you get through those challenging times. And we know with fasting, it comes in waves, hunger cravings, they come in waves. I always tell people, it's kind of like, anybody that's looking to quit smoking, you know, you take it five minutes at a time, right? It's like, "If you can win the next five minutes, you're gonna be okay." And so just

take it five minutes at a time and you get through those hunger pangs, the cravings, and things like that. And using essential oils can be really helpful.

Dr. Zielinski: You know, I would recommend, if you're doing a true water fast you wouldn't want to ingest... and I don't even know what you would recommend, doc. When you're saying water fast, are we talking nothing orally, no supplementation? Literally water or are you incorporating...?

Dr. Jockers: You know, I try not to be dogmatic about it. Some of the experts do recommend only water. I'm okay with water and salt for the electrolytes, replacing those, and I'm okay with adding some apple cider vinegar or lemon lime. With a water fast, I try to do it with zero calories. The apple cider vinegar, with lemon lime, you basically have zero calories when you're consuming that. So those are fine. Diffusing essential oils because again, like you said, inhaling them, you're not obviously consuming calories, but you're getting tremendous benefits, a lot of research out there about the benefits of aromatherapy, you know, taking in those, just breathing them in. And so I think that's extremely helpful. Do you have something to add to that?

Dr. Zielinski: Oh, yeah. So with that then, you could easily add a drop of orange, a drop of lemon in your apple cider vinegar, because again, there's no calories with essential oils. Under that guidance, you probably would want to stay away from a veggie cap, you know, a vegan, vegetarian cap because you have to put a little bit of coconut oil or something in there as a carrier. But I would, for sure...

Dr. Jockers: But you could do that when you do eat.

Dr. Zielinski: Yes, for sure. And I would definitely recommend topical application because topical application is arguably even more effective than internal ingestion to get the essential oils systemically in your body. So the key area... and this is interesting because folks don't get that. A lot of the information online, especially Pinterest and blogs are just flat out wrong. And that's one of the reasons why I hosted my first summit is because I wanted to talk to the experts to get to the truth because I realized a lot of things are going to make sense. And when you look at permeability studies, the areas of the body where chemicals, plant based chemicals specifically, can penetrate and the easiest, the feet are the worst part of the body if you want to get a systemic effect. So you don't ever see someone put a nicotine patch on their foot. Like there's a reason for that, right?

Dr. Jockers: Yes because that's always been the advice, rub it on the bottoms of your feet.

Dr. Zielinski: Yes, exactly. And there's absolutely zero, zero research to substantiate that. Now, reflexology is wonderful, right? That's something that you could use. But again, here's the thing I want to clarify, it's not a bad thing to put essential oils and rub your feet with them. Like, it's very soothing, it's comforting.

Dr. Jockers: It just may not be the best.

Dr. Zielinski: It's not the most effective to get the plant based chemicals in your bloodstream. So, from top to bottom, the most permeable parts of your body, if you kind of think of it, it's almost common sense, are the most sensitive. Your oral cavity, the anus, the underarms, the vagina. I mean, these are the most sensitive parts of your body. Typically the areas where you're not going to be pouring a lot of essential oils, so you want to be careful.

And next would be the trunk where you have the abdomen, you have the chest, like that's actually quite permeable. And it makes sense because there's a lot of vascularity here and there is a lot of... you know, typically, this part of the body typically isn't exposed to sun or a lot of chemicals. It's protected, it's a very protected part of the body. And then you have the arms and the hands and the feet are the worst parts when it comes to permeability.

So, why am I saying that? This is a two for one approach for all of us who are trying to tap into, you know, the limbic system and really capitalize on fat burning, hunger craving suppression, is apply oils diluted over your abdomen, because we see within five minutes, literally within five minutes, studies have shown that the chemicals in essential oils can be detected in the bloodstream. But here's the key though, within an hour and a half to two hours, completely undetectable, which means the body metabolized them. And so you're not going to find that with a drug. You're not going to find it with any sort of pharmaceutical intervention the body can completely metabolize.

But what that also means, sure it's safe, but you have to reapply at least two, three, four times a day, if this is a strategy that you want to do. And if you're fasting for a week or doing daily, whatever, intermittent fasting, you want to up your topical application with essential oils. But here's the two for one approach; now you become a walking diffuser, everywhere you go. Because what happens is, the essential oils really... I should have said this earlier, but they're volatile organic compounds, meaning they're the compounds in the plant that readily evaporate. They're the ones that go through the steam distillation process. When steam breaks up the chemicals in the plant matter, everything that evaporates go through the condensing tube. Anything that's too heavy, you know, stays behind, it's in the hydrosols. It's all about molecular weight.

So when you apply an essential oil, test it. Put an essential oil on the other side of the room, just drop it on the floor, you'll smell it within seconds. Like, the particles are floating in the air. So when you put essential oils on your body, you inhale them. So again, you get that two for one approach. But always dilute because studies have also shown that dilution, whether it's olive oil or jojoba, or you know, sweet almond, whatever, it actually helps open up the pores; prevents evaporation. That's the key because it actually acts as like a barrier so you don't have as much off gassing. And it just is much more effective and safe because you won't burn yourself. Or there's something known as contact dermatitis, which is sensitization, like people have actually caused themselves to be allergic because the concentration of essential oils are just too much for the body to handle.

Dr. Jockers: Yeah, it's kind of like the deodorant I use, I make a natural deodorant. I just take, you know, some sort of essential oil, like orange or something like that, add a little coconut oil and boom, you know, go under the arms. And, you know, it's good to go.

Dr. Zielinski: Anti-fungal.

Dr. Jockers: That's right.

Dr. Zielinski: There's so many benefits to it.

Dr. Jockers: Yeah, so really good. Let's talk a little bit about anxiety and trouble sleeping because those are other issues. When we fast, especially doing more of an extended fast, we elevate cortisol, okay, which isn't necessarily a bad thing. However, for some individuals, they have trouble sleeping and they may have a little bit more anxiety as their body gets more fat adapted and good at burning fat for fuel. So, what are some oils that can help with that?

Dr. Zielinski: There's so many. Here's what I want to encourage someone to do really, is to think about, like you, you practice functional medicine; the word is practice, right? It's not like you have a solution for everyone. And you're good at what you do and everyone has a customized protocol. So the one thing I want to impress upon people is as long... and I keep on discovering new things, my body changes. What used to work yesterday is not working today because I'm a different person, my biochemistry changes based off of my thoughts, my environment, and my food. So there are a number of essential oils that can help. But the thing is, is that you need to take a little time to practice to find out what works for you. And it's encouraging, it's fun, it's a little bit of work, it might cost you an extra dollar. But once you figure out the solution, it is like reaching the Holy Grail.

So the litany of essential oils that can help with sleep is profound. I

mean, we go start with lavender. Everyone always thinks of lavender. Most people think of Roman chamomile. There's vetiver. There's valerian root. There's vitex, most people haven't heard of that. But that's a very healthy, strong women's health oil that can help. Yeah, vitex is wonderful. We have rose, geranium, clary sage, you know, a lot of different oils, and again, going back to the myrrhs and frankincense, anything that could help stop wayward thoughts. The thing about it is, what's causing the sleep disturbance? Is it anxiety? Is it your mind just can't stop? Is it focus? Is it some sort of, I mean, literally, hunger pangs?

So if you can kind of drill down, even to like, "You know, I'm really just stressed out, I just can't stop," maybe try citrus oil. So that's where blending, maybe try an orange with a lavender and a frankincense. See how that goes. Again, most people don't talk about frankincense and orange to help you sleep. But if that's what's going to help you relax, if that's what's going to help stop the root cause, then yes, you'll sleep a lot better. I mean, if it's straight up hunger pangs or let's say if its addiction, because this is something extremely potent; most people... and I would venture to say, most people are addicted to sugar, not listening or watching because these are the health crusaders of the world, so I appreciate everyone watching. You're so far ahead of 99.9% of the planet, just because you're watching this right now. Good for you. Praise God for that.

Most of our friends and family members are addicted to sugar. So if you want to help suppress that, and actually help reverse the addiction cascade or even satisfy it, then that's where black pepper comes into play. Proven, shown to help stop the addiction cascade. We've helped so many people get off of nicotine and drugs, and alcohol by using black pepper. And so a blend that we like is equal parts of black pepper, cinnamon bark, and grapefruit, and you mix it together and you can diffuse it. You can ingest it. But again, we're careful about ingesting oils here while you're fasting. You could apply it topically over your abdomen.

But here's a trick and this is something that I think most people are going to really get a lot out of for this summit especially, is the oral fixation related to eating. It's really hard to stop. We're used to chewing, we're used to eating; we're used to that oral fixation. So we came up with a recipe called a Quit Stick and a lot of folks recommend this and seeing that it really helps. Where you get a toothpick, you can get a wooden, not plastic, and you have something that will be absorbable. Get a nontoxic, healthy wooden toothpick. And what you'll do is you get a little shot glass or a two ounce glass. You fill it half up with olive oil. And then you get... I forget the recipe off the top of my head, it's in my book, *The Essential Oils Diet*.

I would start with 10 drops each of black pepper, cinnamon bark,

grapefruit, and peppermint. And you just mix that up and you put 50 to 100 toothpicks in there overnight. You let the toothpicks suck up, absorb the essential oil and take the toothpicks out the day after, let them dry. And when you get that hankering for something, and you get that feeling you want to chew on something, put it in your mouth. Absolutely zero calories because one concern I have too with gum, a lot of the gums out there, the xylitol, you know, that could really disturb people who have sensitive digestive systems. Even stay away from all of that when you're fasting.

But this is a great way, it can help freshen your breath, helps with the addiction issue, gives you that oral fixation, and you can start chewing on it. And that can help a lot of different things for a lot of different people. And you might find when you're really craving that sugar, that cookie, that cereal like I have when I've fasted, in the middle of the night, put that in your mouth and just suck on it. And watch what happens.

Dr. Jockers: Yeah, I think that's a great strategy. Also, it could be a good strategy before a meal, right? So actually just putting that in actually can help start up some of the digestive juices before your meal. I know I like to take fennel seed or rosemary or something like that and just pop it right in my mouth and chew on that to kind of get the digestive system starting to work, those carminatives there. So, I think that's a great point.

Dr. Zielinski: Well, diffuse those. Actually, that's a good point. Another strategy that we talk about in our last book is diffusing these essential oils a half an hour before your meal. Especially if you're eating or you're doing your fasting and intermittent fasting; that way you're going to eat less. And you'd be more self-conscious of the amount of food that you're eating because the problem is...

Dr. Jockers: You eat better, too.

Dr. Zielinski: Yeah, and you can add fennel. I love the fact that you added fennel. Fennel is so sweet. Fennel oil is wonderful. It has a very nice aroma to it, but it has a very pleasant flavor as well. And you can even... and David, you know because you've been over at our home so many times, put essential oils in your food to help that enhance. Like a little bit of black pepper in your soup, bone broth, whatever it is, like that will actually help too. There are a lot of little ways that you can get essential oils into your life; into your body. And so we want to incorporate that as well.

Dr. Jockers: Yeah, that's great. And definitely using those, especially when you are fasting, whether it's intermittent fasting, or if you're doing an extended fast, you're coming off of the fast, breaking your fast... especially if you're doing extended fasting. Once you fast for more than two days, your digestive juices shut down. So you need to reawaken

them. That's why when you break your fast you're doing it but things like broth and well steamed vegetables and fermented vegetables and green juices, and things like that. But using some of those oils can really wake up the digestive system as well.

So putting them in the food, like you were just talking about, diffusing them before the meals; all those things are really helpful. And when you're intermittent fasting, some people will notice that, you know, there's a little adaptation that has to take place because the body will start to reduce the amount of digestive juices it's producing, when you tighten your eating window in the beginning. Just because it's trying to conserve energy and utilize that energy for healing and repair, so it's actually doing a good thing for you. So if you rush into a meal and you are eating quickly, on the go, and you haven't really prepared your digestive system, you may have more digestive symptoms. So using some of these sorts of essential oil strategies can be really helpful for mitigating that. Okay, so this has been a great interview, Eric. Any final words of inspiration for our audience?

Dr. Zielinski: Well, thanks for having me. Everyone, thanks for tuning in. I want to challenge everyone to follow along when it comes to your fast, to see it through, and to make it a spiritual exercise. That's what changed my life because when you submit a fast, even if it's intermittent fasting, if you do a water fast, even if it's fasting from just sweets for a month, a week, the rest of your life, hopefully; if you take yourself out of the picture, if you take the vanity of looking good, maybe even feeling good, out of the picture, you'll never be tempted to fail. You'll never be tempted to cheat. And if you live a fasted lifestyle and if you really make it a spiritual exercise where this is for God, that puts you at a position where there is no temptation now.

And when I did this, well over a decade ago, I was really convicted by the Lord to live this way. And you know how we live, I mean, we don't indulge, we don't have cheat days. There is no cheat days, like, there are healthy versions of things that we consume, but I've had haven't had an Oreo cookie or a Coca Cola in 17 years. It's just not in my lifestyle. And why? Because I have a fasted lifestyle. So I want to encourage everyone to have a fasted lifestyle. So your body is so much more prepared; your mind, your soul, your spirit. So when you do something like Dr. Jockers is recommending, more of a vigorous fast, your body is so much more readily capable to go through.

But the key is to hold yourself accountable because your bodies are the temples of the Holy Spirit. I believe it with all my heart. And God will help you and see you through. And when you look at Him and be like, "You know, Lord, I'm doing this for you. I'm not doing this to fit in my bikini or wedding dress. I'm doing this for you," something triggers in your brain. And there's like this supernatural power that will get you through when

you really want to eat or when you're really tempted. It's like, "You got this." And to me, that's my secret to fasting.

Dr. Jockers: Yeah. Yeah, I mean, that's so powerful. Absolutely. You've got to dig into a higher power. And you know, fasting is one of the greatest ways to deny yourself, deny your physical body, and tune into what God's telling you to do and tune into your intuition and the leading of the Holy Spirit. So, so powerful. Thanks again, Dr. Eric, for being on. You can check him out, Dr. Eric Zielinski, naturallivingfamily.com. He's got a couple of bestselling books, *The Essential Oils Diet* and *The Healing Power of Essential Oils*.

So check those out so you get more information on how to use these essential oils. Thanks again, Eric. And for all the listeners out there. I want to remind you that fasting has the ability to unlock your dormant healing potential. It's safe, it's powerful, and it just might transform your life. So take this information, start putting it into action. And I know you're going to see incredible, life transforming, healing results. So we'll see you in a future interview. Be blessed.

Fasting and Autophagy for Glowing Skin

Guest: Naomi Whittel

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. And I'm your host, Dr. David Jockers.

And really, really excited about today's guest. I've got Naomi Whittel who is one of the leading pioneers really when it comes to fasting and the idea of autophagy. And she's going to go through her story today. And I really found out about Naomi through her book *Glow 15* and her docu-series, *The Skinny on Fat* which was incredible. But she has been out in the press for a long time trailblazing the road for people like me to come across and put on something like this Fasting Transformation Summit.

And so she is widely recognized as the one to watch in the wellness from within space, named by *Prevention* "the nation's leading female innovator in the natural products industry." She's hailed as a trailblazer and an advocate of purity and potency in nutraceuticals. She is the CEO of Twin Lab, which if you're in the health space you've heard of that nutraceutical company. And she continues to deliver on her promise to help millions thrive with award-winning supplements they know will truly help them.

A premiere wellness partner for QVC, Naomi has been recognized as one of the leading innovators in the natural products industry by *Whole Foods Magazine* in their exclusive Who's Who of manufacturers and suppliers. Her story and products have been lauded by the *Wall Street Journal*; *The Doctors*; *Dr. Oz*; *Shape*; *Access Hollywood*; *Natural Solutions*; *Good Morning, America*; *The Today Show*; and more. And so, Naomi,

welcome to the Fasting Transformation Summit.

Naomi Whittel: Oh my! I am so thrilled to be part of what is my absolute favorite topic in the whole world and something that I would say has impacted my life probably more than any other tool that I've ever used. And it's a tool, fasting, that I've been using really since I was in my teens. It is the most unbelievable and powerful tool. And even last night, I was on the phone with a leading researcher in the area of the microbiome. And I'm really excited to share with you some of the brand new, cutting edge research as it relates to what happens when you're going through a fast for your microbiome.

Dr. Jockers: Oh, I love it! We'll definitely cover that today. And so let's share your story, really how you got going with this because you've said you've been fasting since you were a teenager. So how did that all start?

Naomi: So for me, what happened was I have always struggled with autoimmune disorders. So the first autoimmune disorder that really manifested for me was on my skin. And that manifestation was with eczema. So there's a deep inflammation within my body. And I was born with these autoimmune disorders. And they've continued to manifest in different ways from endometriosis to I have mast cell activation.

And so growing up in Europe—I was born in Switzerland on a biodynamic farm. And my father is a chemist. And my parents were and have always been 100% committed to the healthy, natural way of living. So I never went to conventional doctors. I never had the experience of antibiotics, none of that. So living a very healthy lifestyle, I still was covered in this very embarrassing and uncomfortable eczema that would bleed. And it would pus. And just I couldn't get to the place where I had it under control.

And so using natural solutions to solve for it was what we did every day. So from the anti-inflammatory foods that I ate, unprocessed—all of those things all helped. But ultimately I couldn't push the inflammation down as much as I needed to.

And so when I was in my late teens is when I was really introduced to the power of fasting. And at that time, I would be doing juice fasts. So I didn't know that I could benefit so much more from doing the different types of fastings that we do now. So I hadn't learned about intermittent fasting at that time. I didn't know that water fasting would be good for me. I knew that it was very important as it related to more of the religious ways of fasting.

But at that time I was doing juice fasting. So I would typically do pretty intense juice fasts for seven to 10 days. And I would mix that with different detox methodologies. And they were very valuable. And then

typically once a week I would do a watermelon juice fast. And that was also very valuable at diluting the inflammation in my body and working as a diuretic. So I did that for years.

And over the past—I would say it's probably the past five or six years, what I do in my life is I travel all over the globe. And I look for the solutions that may be coming from nutritional ingredients. They may be coming from plants. They may be coming from technologies all over the globe. So it could be different universities, different medicine men/women. There's so much insight that is wise from generations and centuries. But there's also incredible technologies in universities.

So my work has been—and the work that I did when I sold my company to Twin Lab about two and a half years ago, and I was their CEO for just over two years. I've now gone back to really doing the work that I think brings the most value to so many different people. And that is connecting these dots with these ingredients and bringing them into the marketplace where we know the entire supply chain so what we're putting into our body is really pure.

But what I've discovered over the past five or six years—and this is coming through so much of what's going on at the university level—is that we can do an intermittent fast where we're not eating for approximately—there are a lot of ways to do it. But what works for me and where I see the most research being is this 16 hours of not eating and then eight hours of eating. And here in the U.S. on average, we will eat for 16 hours and then not eat for eight hours. So flipping that on its head and utilizing that as a tool which I've been doing now for five, six years. And that has helped me more than anything in really reducing my inflammation.

And then what it also does is in those 16 hours, you're able to activate autophagy. And we know that autophagy is this natural and biological cleansing detox/recycling that goes on in each and every one of our cells. So if we think we have 37 trillion cells, we have this natural process that most of us never had even heard of that's like the little doctor inside each cell that cleans up and dictates what needs to be removed and recycled. So our cells are able to behave like they did when they were younger. And that's just one of the numerous, incredible benefits that we can get from a short intermittent fast.

Dr. Jockers: Yeah, I love it. I love it. I've been doing really more of an 18/6 myself. And then I do two days where I do a 24-hour water fast. 18/6 I've been doing for five years. And then the two-day water fast I just started over the six months. And I find it to be actually really easy because my body is so fat-adapted.

And it has definitely brought down my inflammation because actually

my mom has psoriasis. And I have psoriasis on my knees. She actually has it on her elbows and multiple different places. So I have that genetic risk. And in a sense, it has already started to express itself. But I keep it down really with fasting and nutrition.

So I love this talk, “Fasting for Skin Health” and really going into this. And so let’s talk about how nutrition and the microbiome—you had mentioned that term—nutrition, the microbiome, gut health play a role with our overall skin health.

Naomi: That’s so great. And I love that you’re doing the 18/6 because, again, there is so much new research that’s coming out constantly. The difference between 16 and 18 is really significant. And so for those, I’ve been so accustomed to doing the 16 where I stop eating at 8 p.m. or a little bit earlier and then I start at lunch time. And that’s been so normal for me that I’ve utilized that. But the 12 to 14 is really not bringing very much value at all. But once you get to the 16 and then what you were saying with 18, there’s just so much benefit. So I love it.

And I love talking about how fasting benefits the skin because I’ve been the human guinea pig for that for so long. And for me, my eczema had such a negative impact on my life I was so ashamed and so embarrassed. I would never let anyone see my arms. Right now, you can see everything and my hands. And I was so ashamed of it, and it was so uncomfortable that I would cover myself.

And really when I finally came out and exposed my skin, it was detrimental to my confidence because it impacted my friendships. It impacted my life. And it was at that time when I was an early teen. And it was just so negatively impactful. So I’ve really committed my life to figuring out ways to reduce that inflammation for myself and then also share that with other people.

And so with the skin, the way that it works—and I think it’s so incredibly fascinating—is just like in our gut. And we know that so many of our skin issues begin in our gut. So we’ve got our microbiome in our gut. We also have a microbiome all over our skin. And the skin on our face, on our arms, underneath our arms, those are all different types of microbiome.

So when we do an intermittent fast, when we do a five-day fast, we’re actually resetting our microbiome in different ways. So a very good friend of mine, a medical doctor, Dr. Mike Hoagland, works actually at uBiome. And he was very excited about everything that we did with *The Real Skinny on Fat*. And so he did a five-day water fast. And what we did is we looked at his microbiome before he started the five-day water fast. And it wasn’t in the condition that he really wanted it to be. His *Lactobacillus* was low. He had a lot of bad bacteria in his gut.

And so when he started the five-day water fast, essentially what happened is all of the bacteria in his gut began to reduce. And as it reduced, the bad bacteria died off. Much of the good bacteria died off. But when he started to repopulate after the five-day water fast and then tested after that, what showed us was that he had more of the good bacteria, the friendly bacteria, that he wanted. So his entire gut microbiome improved.

And it's very interesting when you think about that because in nature when an animal is sick, what do they do? They stop eating. And so you think about what that does to the microbiome. And that's what happened with him. So he wasn't feeding. And then it repopulated a much better way. And ultimately, it's the same thing for the skin. And so his skin improved.

And you notice. We all notice. Whenever we're fasting, we get more beautiful. Our skin radiates that health from the inside out.

Dr. Jockers: Yeah, absolutely. I was tuned into the role of nutrition on our skin health when I was 11 or 12 because my brother had really bad acne. And my mom was always into natural health, grew her own food, things like that. And so she was like, "That's because he eats too much chocolate and sugar." And so I heard that. And of course, I loved chocolate and sugar. And so I was like, "You know what? It's not worth it."

Because obviously, we've all felt that discomfort of having acne or something like that. Obviously with you with eczema, ultimately when it starts to affect our appearance, that is typically a huge trigger for us to start to make changes in our lifestyle. And most teenagers, most people out there just don't even realize there's a link between nutrition, what's happening in our gut, and what's happening in our skin. And so we've really got to get this message out.

And so what have you found as far as—obviously, we talked about fasting and how it stimulates autophagy. So how does fasting impact what's going on in the skin? We talked about the role of nutrition and basically the food we're putting in, gut health and the skin. So let's go into a little bit more depth about fasting and how it impacts the skin.

Naomi: Yes, so when I first learned about autophagy was probably around four years ago. So I was on one of these expedition/adventures. And I was in Calabria, Italy. And I was over there because the citrus bergamot fruit is grown in this very small region of Italy, Calabria. And the researchers over there were doing a lot around how when you ingest this citrus bergamot fruit, it literally improves your cholesterol profiles. It's a very rich antioxidant, polyphenol/flavonol citrus fruit. And just by ingesting it every day, you get these incredible benefits to your cholesterol profiles.

And so many people are on statins. And this is something that can be taken in conjunction. Or a lot of people are taking it instead of. And it's quite remarkable how it lowers and then raises the good. It lowers the LDLs and then raises the HDLs.

So anyhow, I was over there. And the lead researcher, Dr. Elizabeth Janda was showing me how this citrus bergamot fruit was something that she was ingesting every day as a tea. And I got really excited. And I was drinking it with her because for me wherever I am in the world there are always these sort of secrets or activities that go on that you don't necessarily know about in other parts. So when I was in Okinawa, the Okinawans drink three to four to five cups of green tea. They eat lots of ginger. And there are so many interesting things that they do that are just part of their everyday life.

So she drinks the citrus bergamot tea. And she told me the reason she did it was because it was activating her autophagy which is where and when I first learned about it. And if you fast forward 2016, the Nobel Prize in Medicine was awarded to the Japanese biologist who discovered the mechanism of action, why autophagy is so important in our health and what it can really do to allow our bodies to live in the way that they did when they were younger and fight disease.

And so this is so powerful, this information. And what I learned from Dr. Janda was that when you are activating your autophagy through foods like the citrus bergamot, there are so many amazing foods that you can eat. Or you are fasting, intermittent fasting. You're getting this tremendous ability to really help your body do what it naturally wants to do. And that is eat up the debris in the cells, detoxify the cells. And now we know more and more. If you're in day three of a water fast, you're going to a much deeper level of detox with autophagy.

So for all these years, I was always thinking, "Oh, I need to detox with juices or whatever it may be." But what I didn't know until about four years ago was that there is the natural, biological process. The body is just wise beyond what we could ever imagine.

Dr. Jockers: Yeah, absolutely. So powerful! So I love this idea. Obviously, autophagy, just cellular clean up, cellular detoxification. And so what you're saying is that basically doing an extended water fast is the most powerful way to initiate autophagy. But there are simple things we can be doing like you were talking about—drinking green tea, different things like that, implementing some daily intermittent fasting strategies. And so can you go into more detail into all those types of things people can be doing to get a daily dose of autophagy?

Naomi: Oh, I love it! Yes. So my thoughts around it—and this came from a lot of different researchers. So when I got back to the U.S. after

working with Dr. Elizabeth Janda and her team in Calabria, I was just obsessed. First of all, I couldn't even say the word. Once I figured out how to say it, I was obsessed with finding all of the global experts.

So I found the autophagy dermatologist, Dr. Richard Wang. And I found the exercise physiologist who knew how to activate autophagy through certain types of exercises. I worked with Dr. Michael Bruce on the circadian rhythm and how that can really activate autophagy because while we're sleeping it's such a powerful way to activate it.

So I'll give you a couple of the strategies that I use every single day that help to activate it and work hand in hand with intermittent fasting, work hand in hand with this longer fasting. And we know that fasting brings so much value. From activating the autophagy to fat loss, from helping to become metabolically flexible, reducing inflammation, enhancing that stem cell production after three or four days, reducing ROS [reactive oxygen species], the list goes on and on and on.

I'm working with one of my friends who's a PhD. And he's getting ready to do a debate at the university level around the power and the need to fast versus maybe not doing it. And we were going through this weekend the list of all of the benefits you get. There are 100+ benefits. So you can't go wrong even if you get one of them.

But with autophagy and activating it, there are ways that you can activate it in the skin. And I like that as a very simple solution because you get quick results. And there are certain foods that you can eat. But what I would say for the skin—and you can put these ingredients on your skin as well as ingest them, which I always like this idea of outside and inside meeting each other. Outside meets inside.

15 years ago while I was in Southeast Asia, I was discovering how so many women were ingesting so many collagen foods and literally taking collagen supplements. And what I discovered was that they were consuming about 10 to 15 times as much as what we consume here in the U.S. And in the U.S., really I was so concerned when I would look around and everything was skinless, boneless, low fat, no fat. And that is so counter to collagen.

So all those years ago, I got in my mind. I was like, "I've got to bring collagen into the U.S. market as a beauty from within, as a nutritional ingredient." And I'm just so happy in today's climate. People know this word collagen. They know that we can ingest it.

So things that are really good for activating autophagy are—caffeine is a great example. So if you're drinking green tea, if you're drinking coffee, those things help to activate the autophagy in your skin. And you can also use products that have caffeine in them. That's really beneficial. In

my book *Glow 15* I have tons of do-it-yourself recipes for the skin.

Another one that's really powerful for activating autophagy internally and externally are ceramides. And you know you ceramides are found in wheat germ. I take ceramide supplements. And ceramides are really important for someone who deals with autoimmune conditions. Ceramides are sort of like the glue that holds our skin cells together. So if we think about a brick wall and then the mortar that's between the bricks, that's like the ceramides. And our skin literally leaks moisture as we get older. And so when you're replenishing the ceramides both on the skin and then you're ingesting those ceramides, you're really helping to reduce that leaky skin syndrome. And we know about leaky gut syndrome. So again, the skin and the gut, there's always this mirror activity.

I would say polyphenols. So the red wine antioxidant, resveratrol which I am deeply passionate about. That's really what I built my company Reserveage on, the red wine antioxidant. But the citrus bergamot is another polyphenol, all of the dark berries, the dark chocolate. There are so many great ways to get good polyphenols.

I also like getting polyphenols in a lot of the tart cherry drinks. I like to get them in that way especially because for me I like to live a keto or high-fat lifestyle. And so I'm not going to be ingesting a lot of different sweets of course. And so getting it in a powder where you don't have the sugar but you still get the polyphenols, I think, is a great way to do it.

And then trehalose, which is actually a sweetener. But trehalose comes from mushroom. You can get that in your skincare. I'm not so excited about ingesting a lot of it. But I do use it periodically. And it has about 1/7th the amount of sugar as, let's say, cane sugar does. But trehalose is excellent for activating the autophagy in the skin as well.

Dr. Jockers: That's really, really interesting. I always noticed when I would consume turmeric, like doing a golden tea or something like that, the next day, before I knew the autophagy mechanism, I just always felt like my skin was so much softer and cleaner. And so I thought it was just the reducing inflammation. But obviously, now I know it's also stimulating the autophagy with the polyphenols.

Naomi: That's right. What I did with Dr. Richard Wang was I brought him 300 ingredients. I said, "Okay. I want to know which of these? Because I think all of these activate autophagy."

And he's like, "No, no, no, no, no." And that's where he came back to me and said, "It's the polyphenols. It's the ceramides. It's the caffeine. It's the trehalose, the resveratrol." Turmeric is definitely one that activates the autophagy in the skin.

And what he did is he looked at the different pathways to activate that autophagy. So we had a lot of fun. And I was amazed at the clinical results. Reduction in fine lines and wrinkles of up to 30%. Literally, in the petri dish there was research where he took human skin cells of someone who was in their 60s and had human skin cells of people who were in their 20s. And the people who were in their 60s, what he did is he took those cells, and he utilized these ingredients and activated the autophagy. And those cells behaved like the cells that were in their 20s, just by basically utilizing these ingredients.

So the science is just at the beginning. But it all ties into the gut health, the microbiome, the skin biome, fasting that can improve. You think about even one day of fasting like you're doing or the longer five- day water fast and what that does to repopulate the good bacteria and the microbiome of the skin.

Dr. Jockers: Yeah, it's so powerful. It really is, in a sense, the fountain of youth if there is one. And the cool thing about it is it's free. It just takes a level of willpower and just a decision that we make to do it and some strategies as far as how to make it more comfortable for sure.

And so right now, I haven't eaten since 1 o'clock yesterday, and I'm doing this interview. And I feel great. I feel fantastic. So I'm just completing a 24-hour fast. And I'll workout around 12:30 or so. And then after my workout—so I work out fully fasted which stimulates more autophagy like resistance training. I know you had mentioned exercise. I'd love for you to talk a little bit more about that. But resistance training. I'm going to do a leg day actually. So some squats, some sprints, things like that.

And then afterwards I come home. And usually I'm not even hungry. But that's typically when I break my fast, after the workout, after I'm hydrated and everything.

And so can you talk a little bit about how exercise stimulates autophagy as well? And then after that, go through what you typically do on a regular basis as far as your fasting regimen.

Naomi: Great question. So for me, I'm a mother of four. I've been a busy CEO. And with all of these different pieces, I'm always looking for the easiest solutions to try to achieve the most results. So I try to do the least for the biggest results. And that, what you were just saying about incorporating fasting into the timing of when you exercise, is really, really great.

And then the types of exercise that activate the most autophagy are either interval training. And I'm not a big exerciser. I love movement. And I believe that if it's getting up once every hour, moving around, having a timer on your desk; if it's twitching. We're finding that twitching

in and of itself has a huge impact on our health and exercise. So there are so many little ways that we can incorporate movement.

But to activate autophagy, what you really want to do is, according to Dr. Beth Levine who has done the majority of the research around exercise and autophagy, for 30 minutes, you're either doing interval training or you're doing resistance training. And during those 30 minutes, you're getting a really nice increase in your autophagy. But what you need to do is do it for the 30 minutes.

So if it's interval training, I like to do it simply. It could be walking faster for 30 seconds, 1 minute and then slowing down and doing that back and forth. The biggest thing for me is not putting myself through too much stress. We want that acute stress. Autophagy loves acute stress. But it doesn't want any of that chronic stress. There's such a burden on all of us because we're trying to do so much more than what we would do historically. And so if we can just be mindful of acute stress versus chronic stress and giving yourself those short bursts of it. And what you were saying about exercising in a fasted state, running on empty when you're exercising, autophagy loves that.

In my world, what I like to do is I like to—I call it pre-game with caffeine. So you get some caffeine. And that caffeine is also helping to activate the autophagy. You're not eating. And then when you do break your fast, I like to start with fat first.

And you were mentioning how much easier things are when we're fat-adapted. I couldn't agree with you more. And for everybody that's watching, the way I look at things is if it is really difficult and you are not enjoying the process of fasting, then you probably need to just step back a little bit, work on becoming more fat-adapted. Maybe you need to detox. And you need to just take those two steps back. So maybe you're incorporating too much sugar in your diet. And that makes it feel like it's a jarring experience when you're fasting. We should never feel that way. We should always look forward to the increased energy, more focus, all the benefits that come with fasting.

Dr. Jockers: Yeah, absolutely. Once you're fat-adapted, it just becomes so much easier. And you're right. There are times when I'm helping my family eat meals. I've got actually three kids. So you've got four. I've got three under 3. Twin boys.

Naomi: Wow! Okay.

Dr. Jockers: Yeah, and so I'm helping them out. And I'll be like, "Oh, this food smells really good. I'd like to eat it." But at the same time, there's part of me that's just like, "Don't do it. I feel great right now." And so it's listening to that part of myself. And I have a totally different relationship

with food through it.

And I'm glad you brought up the fact that you've got four kids. You've been running companies. You've got four kids. So it's a tremendous amount of stress and demands on you. And so you've obviously had to really gain this knowledge, this kinesthetic intelligence about the messages your body is telling you because if you're trying to push it, push it, push it and you're fasting and you're trying to do a high intensity exercise, you can certainly overwhelm your system.

And so what are you personally doing? How do you monitor your own physiology and the stressors in your life? And how do you implement fasting with that?

Naomi: It's exactly what you were just saying. So there is a language that our bodies speak to us. And tapping into that, for me, was the difference between barely surviving and being in a place where I could thrive. So I want to be able to walk the walk. I want to be able to share the research and the insights that I get from all of these global experts. And in order to do that, I travel. Two years ago, I traveled around the globe eight times in one year with four children, being a busy CEO.

And the impact of just the environment, the pollutants, the toxins, the environmental stressors and then on top of that when I look at my own health with my inflammatory and autoimmune disorders, it's a very delicate juggle. And I can easily fall down and fall off. So I take the language that my body is communicating as what I listen to more than anything. And I'm always then reaching to the top experts, which I feel so privileged to have access to, to be able to help me tweak as I'm going along.

So what I do is never static. I can tell you what I'm doing right now. I've been doing a five-day water fast every four to six weeks really to take my inflammation to a much lower level. And that's been working incredibly well. I love to eat high fat. And I really feel for us as a society because there's so much conflicting, overwhelming, negative information that gets out there.

And I'd never take the information that's out in the media at face value. One day, they're trying to frighten us not to eat the saturated fats. And really, the data doesn't support that. So I make sure that the meta-analyses or the really deep research that's out there, that's where I pay attention. And then I let that lead my health and my life.

So I eat high fat. I eat tons and tons of coconut, avocados, macadamia nuts, pili nuts. So I love to be in a ketogenic state. And I cycle that. So I'm fasting. I'm doing intermittent fasting to activate my autophagy. I'll do that every other day. I have high days and low days. So on a high day, I'll

be eating my fat-adapted way, which feels great.

And on a low day, I'll be reducing my protein. So I'll do this protein cycling. So a low day will be a day where I'll have about 5% of my calories coming from protein.

I'm really into understanding my own biological rhythms. So there are quizzes that we can do to see what type of bird we are. In my book *Glucose 15*, I have just the basic quiz that you find out if you're a lark or if you're a super lark or if you're a night owl. And once you tap into your own biological rhythm, that helps me more than anything to create the space so that I can function in my optimal place.

And every day throughout the day, I'm constantly just touching base and saying, "How does my energy feel?" Once you and I are done with this interview, I'm getting on a plane. And I'm traveling. And I know that during that travel time I have to prepare. So there are certain nutrients that I take. I love berberine. I love turmeric. I love the different polyphenols that activate the autophagy. There are so many ways that we can improve our health.

But what I believe in more than anything and it's what you're doing right now is just sourcing really good knowledge and then figuring out the simple and easy strategies that work for me.

So number one, getting my biological rhythm in check. Making sure that I'm feeding my microbiome with the right types of foods. So I love fermented foods, lots of polyphenols, the good fats, the healthy fats. And then really making sure that I'm not eating too often because if I can be fasting on a regular basis, it changes the whole game.

Dr. Jockers: Yeah, I'm totally with you. Absolutely. And so what you're saying also is it's not necessarily cookie cutter because you might have different stressors in your life at different times. And so listening to your body and figuring out when the best time for you to do that five-day fast, to incorporate the high and the low days is how you implement it with this really crazy, busy lifestyle. I don't even know how you do it. So I don't travel anywhere near as much as you. I try to stay home around my family and get my work done.

Naomi: That's awesome!

Dr. Jockers: Yeah.

Naomi: And it's the right way to do it. But only thing there will be just one piece that I would add. And this is probably the most important nugget that I would share. On an average day, we have over 60,000 thoughts. And what we think and what we believe or what we are not

aware that we may be thinking in our subconscious has such a direct impact on the way that feel, on our toxicity level, on our ability to really live the most vibrant life.

So if you are paying attention to that underlying thought process that's going on and you find that you may be feeling some negativity or whatever it is, really take the time to do the meditation. Take the time to listen. There are so many different ways where you can help to reprogram your mind so that you are thinking the positive, good thoughts that help you live your best life.

Dr. Jockers: I love that! I love that. Just great words of final inspiration there. And where can people—I know you've got a great book, *Glow 15*. And you also have produced *The Skinny on Fat* documentary series where you had Montel Williams in that as well plus all the top researchers. In fact, I was looking through that. And I'm like, "Oh, we need to interview these experts that I found through you for this project that we're working on."

Naomi: Yeah. Beautiful.

Dr. Jockers: But where can people find out more about you, get your book, and learn about *The Skinny on Fat* documentary series as well?

Naomi: Sure. So my book *Glow 15* is all about autophagy. And it's a very simple plan. And I was humbled it became a *New York Times* bestseller. And here was a word. Sanjay Gupta wrote my forward. The reason he wrote the forward for me is he said, "Naomi, I really want this word, the concept of autophagy to get out into the world. People need to know we have this process." And so I knew it was a bold move to write a whole book on autophagy with most people not knowing the word. But I cannot tell you how exciting it is to see the amount of us that are understanding, "Wow! I have this power. I can do this."

So you can definitely go to my website which is NaomiWhittel.com. Go to the *Glow 15* website. I'm on Facebook. I'm on Instagram. And I'm on an amazing adventure. And I love, love, love when people join me on it as we discover these health and wellness secrets all over the globe.

Dr. Jockers: Well, Naomi, this has been one of the most fascinating interviews that I've done really at all. And I love the concept of autophagy. I love what you bring to the table. And I just want to thank you for all the great work that you've done getting this information out and curating the top experts and getting this out into mainstream press and out into the world so people learn about it. So thank you again for that.

Naomi: Oh, it's such a pleasure to be with you. And I'm so passionate

about the work you're doing. So let's just keep sharing.

Dr. Jockers: That's right.

Naomi: And keep up the great work.

Dr. Jockers: Well, thank you so much. That means the world to me. And for you, the listeners out there, I just want to remind you that fasting has the ability to unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life. So we will see you soon. Be blessed!

Fasting and Its Impact on the Microbiome

Guest: Mike Mutzel

Dr. Jockers: Well, welcome, everybody, to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. It's something our ancestors did. It's something, really, I mean up until this generation, we've practiced on a regular basis, whether we wanted to or not. And what we've found with research is that there are powerful healing benefits to time restricted feeding and also to prolonged fasting.

And so, I'm your host, Dr. David Jockers. And today we're going to talk about fasting and its impact on the microbiome. So we know that the gut plays such a significant role in our overall health. So we're going to go into really what role nutrition and then, of course, not eating, fasting, and how that impacts our microbiome.

And so I brought on a good friend of mine who happens to be a specialist in the microbiome. This is Mike Mutzel. And he wrote a great book, called *Belly Fat Effect*, that I would highly recommend to anybody that's out there listening. It's called the *Belly Fat Effect*, a really great book. It goes into a deep dive on the microbiome. It talks all about weight loss resistance and how we can impact our gut in order to help us burn fat for fuel and optimize our lean body tissue.

And he also has a great podcast and You Tube channel that I subscribe to. It's called High Intensity Health. He interviews people all around the world that are experts in fasting, keto, microbiome, and functional medicine as well. And so, Mike, welcome to the Fasting Transformation

Summit.

Mike: Dr. Jockers, thanks so much for the opportunity. It's great to be with you. We've had two amazing videos over the past couple of years. I'm super grateful to call you a friend and learn from you. I continue to learn from you in all of the great work that you're doing. So I'm honored to be here.

Dr. Jockers: Oh yea, absolutely. Well thanks so much for being a part. And tell everybody how you really got started with functional medicine, and what interested you in the microbiome?

Mike: Yea, really good question. Like many people, I had health issues. My foray into this was through over-training in college. I wanted to be a pro cyclist. Don't ask me why. This was back when Lance Armstrong was on the Tour de France. My dad was really into it. I started racing for the school bike team, the college bike team, and I was training twenty to twenty-five hours a week and got really depressed and tired. I had a lot of GI issues, constipation, diarrhea, and so forth. And I kind of knew that I was over-training.

But I went to the school doctor and said, hey, I feel really like lightheaded. Every time I stand up I get dizzy. What's going on? And she was like, "You know, Mike, you're probably just depressed. It's your senior year. You're a premed student. Why don't you just take an SSRI?" And I'm like I really don't think that's the issue.

So anyway, I went back to the medical research. I typed in over-training syndrome, and I found like this whole list of endocrinology and gastrointestinal complications in athletes that are over-training. I was like it's so weird that this doctor wouldn't tell me about this.

Anyway, so I just realized that there was a chasm there. Through a little bit of serendipity, I started with an integrative medical doctor right after I got into college. After college I got into a sales gig working for a functional medicine supplement company. So I got really exposed that way.

And my foray into the microbiome was through one of the medical assistants at Gerard Guillory's office, this integrative physician that I was working with, so I could get some hours and some volunteer work in order to go to med school. She underwent gastric bypass surgery or bariatric surgery. She lost, I want to say it was about 200 pounds or 250 some odd pounds within a matter of like 120 days. She didn't change her diet, which was really interesting, because I thought the doctors would tell her to change it. So she was still kind of eating a lot of that junk food, but lost the weight.

And I thought there has got to be more to this than just restricting how much food someone can or cannot eat via the procedure. So I went to the med school library. I loved researching and all that. And I'm like trying to figure out the mechanism of action of gastric bypass surgery. And who would have thought that it changes the microbiome. It reduces endo-toxin exposure, which we can talk about. It alters the gut hormones. These are the satiety hormones that are actually upstream of insulin signaling, of leptin signaling, and all the different satiety hormones.

So I was like just amazed at this medical intervention, gastric bypass or bariatric surgery. It really didn't have anything to do with like calories in and calories out so much. It was more about this metabolic effect. And I thought, okay, well gastric bypass is very expensive, it's very invasive, it's irreversible. It's probably not something that people should go out and just we all should be doing. What are the natural ways that we can mimic this metabolic effect?

And it turns out that things like exercise, just chewing your food, eating food with people you care about, being grateful, taking deep breaths, like all the things our grandparents taught us to do and mom taught us to do when we were growing up probably, but we're not doing anymore. Even the time of the day, and we can talk about this when it comes to circadian rhythms, and time restricted feeding and so forth tends to affect these gut hormones and affect the composition of the microbiome, thereby kind of mimicking that metabolic effect. So that's how I got into it. And I was just blown away by that.

And I thought, you know what, I just want to keep diving into this research rabbit hole and then interview people and share that with doctors, because in my sales rep position, I realized that doctors are so busy in their clinical practice. They're managing insurance and managing the overhead. They didn't have time to go looking into the research. And I thought, what if I can be a conduit to these practitioners and give them information because they're too busy? They're spending a lot of time. As you know, as a functional medicine practitioner, sometimes visits are ninety minutes, back to back. And so that's kind of, I feel like, my life's work. And that's what I do. And here I am.

Dr. Jockers: Yea, absolutely. And so, let's talk about the microbiome. Obviously you wrote this book. You started studying the gut health and its impact on our metabolism. And you just got really, really deep into it. And you wrote this great book, *Belly Fat Effect*. And so that's where you really define the microbiome and its impact on our health. And so, can you do that for the listeners here?

Mike: Yea, well, there's the human microbiome project. If we go back to like 1999 to 2000, we all heard about this, the human genome project.

And it was touted to be kind of the answer to health. Like as long as we know what genes we have, we can figure out if we're going to be predisposed to Alzheimer's dementia, heart disease, cancer.

And there were a lot of disappointing results from the human genome project, because once we figured out the genes, we realized that there is this whole other field called the epigenome. And that's the environment interaction which tells our genes to be turned on or turned off and so forth. And then we came across this organ that a lot of traditional doctors, integrative medical doctors, chiropractors, naturopaths, if they went to school before 2012, didn't even learn about.

This organ is metabolically as active as our liver, which as a side-note, our liver is the most metabolically active organ we have. So our microbiome has more metabolic activity than our most metabolically active organ, which is crazy. And so our microbiome is this newly discovered organ. There was a big initiative back in 2012 about the human microbiome project. And this was really a multi-nation study, still ongoing, where researchers are trying to figure out how bacteria affect our health.

And so I had just started diving into that research. And what we now know is that without our gut bacteria, we would not absorb some of the nutrients that we get from the food that we eat. All the different hormones that we think about, testosterone, growth hormone, cortisol, our microbes can synthesize and make any of these compounds.

I know you've talked a lot about the ketogenic diet, and we'll talk about ketones and fasting here shortly. The main ketone body, beta-hydroxybutyrate, is made by our liver. Our microbiome makes a very similar molecule called butyric acid. And it's so structurally similar, and there is some research suggesting that it may convert butyric acid made by our gut bugs to beta-hydroxybutyrate and so forth.

So yea, our microbiome, it's indispensable in terms of like optimal health. And what we now know is individuals that are born via c-section have different microbiomes than children that are born naturally through the vagina of their mother. Children that aren't breast fed and have infant formula have altered microbiomes, and therefore, they are more predisposed to different diseases, everything from atopy, skin disorders, auto-immunity, depression, dementia. I mean the list goes on.

But I think for most of the listeners, what's really interesting about the microbiome is the alterations that are linked with obesity and weight gain and insulin resistance. And so what was really surprising to me, having a masters degree in nutrition (that's kind of part of story we didn't get to talk about, but I didn't want to share all the details), I earned this masters in nutrition. And we were kind of taught in nutrition that

you have high calorie, high sugar foods. Those raise blood glucose. And then your pancreas responds by releasing insulin to lower the glucose.

But what we now know is when you eat those high calorie, high processed foods that are associated with the Western diet, you actually perturb your gut microbiome and cause low level inflammation, leakage (also known as intestinal permeability), that cause literally bacteria fragments to get into the sterile compartments of the body, trigger inflammation, and that actually triggers the insulin resistance. So it's kind of a new way of thinking about how we get overweight and get insulin resistance and so forth. And I think, in my eyes, it's really fascinating, because we then more custom tailor dietary treatments and focus on food quality.

Dr. Jockers: Yea, I totally agree. I think any time there's a health issue, we've got to look at the gut and the overall diversity of the gut microbiome. And we've got to look at that and understand what's happening there and what role that's playing in that individual's health issues. And so what are some signs and symptoms that the microbiome is out of order, like a dysbiosis? Maybe you can define that term, too.

Mike: Yea. So dysbiosis would just kind of characterize the imbalance of the bugs. So we talk about dis-ease, dysbiosis of the microbiome refers to the bug. So categorically, there are different ways of looking at this. There's the firmicutes to bacteroidetes ratio. There are various pathogenic microbes and phyla. So there are different ways of looking at this.

But what I like to tell people or have people a way to figure out if their own gut bacteria are altered is just ask some of the questions like we just talked about. Were you breastfed, yes or no? Were you given antibiotics during the first several years of life, yes or no? Were you born via c-section or vaginal delivery? Did you grow up near or around a farm or any farm animals, or did you have a pet in the home? Have you been given proton pump inhibitors, acid suppressants? Have you had a history of taking ibuprofen or over-the-counter non-steroidal anti-inflammatories?

All those, if you answered yes to a lot of those, there's a high probability that your microbiome is going to be imbalanced. Also, your diet, your exercise, your overall lifestyle, your life load, your stress, those are all going to factor in, right? I mean this may be loose to say, but if you have a health ailment, if you have auto-immunity, if you have depression, if you have hormone imbalances, you have obesity, if you have diabetes, there's a high probability that your microbiome is imbalanced.

And so then the question becomes what do we do about that? And it's hard to argue with the whole real foods style diet, all the lifestyle

modalities, and as I'm sure we'll talk about very soon, compressing that feeding window, adding in some element of intermittent fasting. I think part of the reason why we have all these imbalances with blood sugar, with inflammation, and so forth, you know now we have food being exposed to us twenty-four/seven and 365, which is really an unnatural thing. It's as unnatural as, I don't know, watching Netflix at 2 in the morning, right?

Humans have evolved. And unindustrialized humans live and die by the sun and by sleep/wake cycles, right? Predators are out at night. So you want to be close to your family unit. Villages will basically go to bed. And you're not going to be eating out of the refrigerator and freezer and so forth.

And I have backyard chickens, just to use a small example. And they're prey for foxes and coyotes and raccoons and all of that. In fact, a raccoon just killed one of our chickens the other day. But anyway, as soon as the sun goes down, they stop eating and they go in the tree or they go in the coop. It's like every single night. They are so predictable. As much as I live this stuff, sometimes I have to edit a video or edit a podcast, and I'll break my sleep/wake cycle a little bit. But chickens or other animals, they can't afford to do that, because if they do, they die, right?

And when we break that, we don't necessarily die. We just become a little bit more insulin resistant. We have a little bit more food cravings. Our cortisol levels are off. And if we prolong that over ten, fifteen, twenty years, we might have an early onset of an age-related disease.

And so that's the thing when people are making lifestyle changes, sometimes we notice the immediate effects, like if you fast for twenty-four hours, your mindset, you'll be more clear mentally, right? But you may not lose fifty pounds right away. It's going to take a lot of time. So that's the hard part about making all of these lifestyle changes for people. We want this instant gratification. But we must realize that it's the day in, day out habits.

But anyway, going back to the sleep/wake cycles, when we start to break those and we start to have dinner later, we're going out with friends, we're drinking alcohol, we're having dessert, we're eating at all hours, and so forth. Some people I remember in college, after partying, we would have more food. We would have pizza or go to Taco Bell at 2 in the morning. A lot of people would do that, and then we would wonder why we gained weight. Gee, the freshman fifteen. Is it just the cafeteria food, or were you eating all the time; whereas before when you were at home, you probably didn't?

So the sleep/wake cycle, circadian rhythm biology, are key for our own

human cells, but also our microbial partners. They are an organ that live on and within us and contribute to our health. And so they have the same circadian biology mechanisms and genes and enzymes and all of that. They have that same machinery. All animals do. I mean this was discovered in basically a worm and *Drosophila* flies. I mean this is how we discovered the whole circadian clock system. So we need to understand that.

And so if we're feeding our bacteria outside of a proper feeding window, we're going to have different populations that will thrive and others that will not thrive. And the chances of creating dysbiotic condition in that environment are very high. And you don't want to fast for five days at a time until we get it, but pretty much every single human should follow some element of time restricted feeding, compressing that feeding window. We just know that the biology is there at this point in time. And if we rewind the clock two-hundred years, we're good. If we go to sub-Saharan Africa and see people who are industrialized, they are doing that naturally anyway, and so should you.

Dr. Jockers: Yea, I totally agree. I mean you look at some ancient tribes, like for example, even the Spartans. So there's this great movie, "Three Hundred." The Spartans had this amazing resiliency. And they were known to fast through the day and then kind of feast in the evening with their family. And they had this remarkable resiliency and strength. And they were able to take on armies much larger than themselves. So it's something that has been known for centuries. And our ancestors, many of them actually knew the benefits of time restricted feeding and practiced it.

And going back to sleep, you know, an interesting thing, too, is I was reading some research where melatonin not only is our sleep hormone, but it actually helps to regulate the microbiome. Have you seen anything on that?

Mike: Yea. You know, Lynn Patrick has talked a lot about that. I interviewed her on my You Tube channel. But, you know, melatonin is also just good for blood sugar health in general. So it kind of makes sense. There's some really good research on melatonin and fatty liver. And there a lot of people, of course, that get into fasting for weight loss or blood sugar regulation. We know that our liver is this key metabolic organ. It kind of doesn't get talked about a lot. But yea, melatonin is great. It's something I recommend often. I take it myself. I think it's an amazing supplement for sure.

Dr. Jockers: Yea, yea, absolutely. And, of course, if we're eating very late at night or staying up very late at night, we're going to suppress our melatonin production. So we want to get that really good melatonin

production. So, let's talk a little bit about intermittent fasting and how it impacts the gut. I mean you've mentioned that time restricted feeding and that role. So what have you seen out there in the research as far as how it impacts the gut? And then also, what are some of the best practices for that? Like what would you recommend to somebody to start a climb when it comes to intermittent fasting to help improve their gut?

Mike: Um, brilliant questions. Yea, I'll definitely address those. There's one thing I wanted to mention that's kind of controversial in the medical literature. You referred to Sparta and stuff. And their eating pattern is kind of going to be one meal a day. We could characterize it as eating one in the evening. It's interesting about that. And so I talked about this a lot in the book, *Belly Fat Effect*.

What a lot of people are doing is skipping breakfast and skipping lunch, or having kind of a late breakfast or late lunch and then dinner. There was an article in, I think, *The Journal of Obesity Medicine* in 2013, where I think it was seventy-seven overweight women. Part of the trial was to put some on a recommended big breakfast and then fasting all day, or fasting all day and then a big dinner. And actually individuals lost. And this is so controversial. I just think it's just really interesting. And it adds in this element of personalizing everything. Some of these women actually lost more weight and had better blood sugar regulation by having the bigger breakfast.

So then we hear different things out there where people thrive skipping breakfast. Like I, myself, do thrive like that. Whereas my wife goes out, she does like a lot of working in the morning to kick start her day and get her bowels moving and all that. She likes to have her breakfast afterwards because then she goes into the chiropractic clinic. And if she doesn't have breakfast she is like kind of tired and starts to lose that mental energy.

So I think whatever we talk about right now, just remember folks, just personalize this to your diet and your lifestyle and what works for you. But yea, what are the mechanisms as to how intermittent fasting may affect the microbiome and your gut and gut health? There are a lot of different speculations out there.

But I think it comes down to the fact that eating is literally pro-inflammatory. I mean we need nourishment, we need food. But if you think about what's in your gut, it's vomit and poop. I mean really, it sounds gross. But it's pro-inflammatory in a way, because our gut is kind of outside our body. The internal milieu of the lumen is outside of our body.

And there are a lot of fermentation products due to these products that

are making secondary fatty acids. We know about acetate, propionate, and butyrate, the three short-chain fatty acids. But there are so many other volatile organic acids. And those compounds affect literally the local environment within our GI tract.

And the other thing to keep in mind is just on the adjacent, so we have the internal lumen of the small intestine, which is the majority in terms of length of the GI tract. Just on the other side of that one single cell layer--which I will just pause, it's important for people to recognize. Many people listening right now have probably had a paper cut at some point in their life. Our epidermis is seven layers thick, seven layers. Your intestinal lumen is only one cell layer thick. And it needs to be that. I mean if you had seven layers of intestinal cells, you would die of malnourishment.

So we need to absorb stuff, but not too much so that we cause inflammation. So that's kind of the thing. So the way that the body gets around that is by placing a lot of what we call antigen-sensing cells, [inaudible] receptors. These are all immune cells that are sitting there waiting. They are constantly sampling the environment. They're kind of body guards or TSA security guards saying, okay, are you sure you don't have any guns or liquid ounces over 4 ounces? So that's what our immune system is constantly doing.

And if we're constantly feeding that by eating and snacking, eating all the time, I mean there's only so much work that you can do. You can't work TSA agents twenty-four/seven, seven days a week. They're going to just lose their vigor, right? Your immune system is the same way. I mean your immune system needs energy and fuel, and it has its own sleep/wake cycle.

So we're just constantly bombarding our gut with all of these foreign materials, I mean that's what food is, it's non-self. It's foreign material. And you're requiring your immune system to work every single time you eat, right? And so when you eat a lot of junk food constantly all the time and you're constantly snacking, you're just literally creating inflammation, low grade inflammation. And at some point your immune system might get confused between self and non-self. And that's what we call auto-immune disease.

And literally, if we look at obesity, obesity meets, I think, four of the five defining criteria of an auto-immune disease. So it's really kind of interesting. We talk a lot about that in the book, *Belly Fat Effect*. The only hallmark of auto-immunity that obesity doesn't meet is there is no specific antigen that there's an immunoglobulin antibody that's made against. Like we don't necessarily have antibodies against our fat tissue. So that's the only defining criteria of an auto-immune disease that obesity doesn't meet, which is really interesting.

So mechanistically, I think part of it is just due to smoldering inflammation from eating all the time. And you take that away when you compress your feeding window or when you fast. The other mechanism is related to Gram-negative bacteria.

So we've heard of endotoxins. Anyone that's a nurse or knows a doctor has heard about sepsis or septic shock. Heaven forbid if you were to fall off your roof. Like it's Halloween and maybe you're hanging Halloween stuff around your house. And you fall off and you puncture your intestine, for example. You would be leaking a lot of bacteria, and you would get septic shock. And it turns out that a lot of us have low-grade sepsis and we don't know it.

And so when we're eating, it's mostly a lot of fat with a lot of carbs. And that's where people get kind of confused about the keto diet, because they hear it's high in fat. And I read this one study that showed that that causes insulin resistance. That's really in the context of high fat and high carbs together. So the analogy that I kind of use, and not to invoke violence, but carbohydrates kind of load the gun and fat pulls the trigger.

So if you have french fries with a big hundred grams of sugar, liquid sugar, that's a great way to cause this endotoxin, which is basically a bacterial fragment. We all have endotoxin within our GI tract. No one doesn't have it. The average human has about five grams of endotoxin in their GI tract, which is enough to kill you. I mean if you were to perforate your bowel and didn't get rushed to an emergency center, you would die from endotoxin shock.

So, your dietary choices, your exercise choices, your feeding window pattern can increase levels of this endotoxin into your bloodstream. And there was an interesting study that came out in 2012. And it was the *Journal of PLOS One Biology* that found that endotoxin in the blood correlated with body fat percentage, visceral adiposity, triglycerides, and blood sugar. Okay, again, these are all factors of the metabolic syndrome. These are all factors of diabetes, pre-diabetes, and obesity.

Again, a lot of folks listening may be interested in fasting because they want to lose a little belly fat or they want to improve their blood sugar. And so again, we now know that part of the reason that you may have gotten those diseases in the first place goes back to the gut. So that's why the impetus for improving gut health, compressing that feeding window, and fasting.

So, I think I answered your question. I know you had a third one in there. Was that about ways to do this?

Dr. Jockers: There goes the Krispy Kreme donuts, right, the fat and

carb combo so classic in America. Yea, I mean I think you hit it right on there with endotoxins. That's a big thing to talk about. And research has shown that it reduces endotoxemia.

In fact, I saw something out of *Journal of Neuro-Inflammation*, 2014. This was on rats. But what they did was they did them on an alternative day fasting, so twenty-four hours every other day. And they showed a pretty significant drop in LPS activity, LPS-induced elevation of certain cytokines and tumor necrosis factor alpha, all these genetic pathways that are associated with chronic inflammation.

And they also showed intermittent fasting, they were there for thirty days, every other day. So fifteen days they fed and fifteen days they fasted. So it would be you like you fasting. So it would be like you fasting Monday, Wednesday, Friday, for example. And they showed a significant rise in interleukin 10, which had an anti-inflammatory effect on the body. So it was pretty significant there. Again, it is on rats. But there are a lot of people who have had similar benefits.

In fact, for myself, I actually started with time-restricted feeding when I was in graduate school, before I knew anything about fasting. In fact, I was taking classes, because I got a masters degree in exercise science. And I was taking classes where they were saying that you've got to eat six meals a day. You need to eat in the morning before you work out.

And so I just noticed that I felt better. I had struggled with irritable bowel. And I noticed that I felt better when I didn't eat. And for me at the time, it was not eating in the morning. And I still practice that. I would just drink a lot of water. In fact, I would bring a gallon of water with me to my classes in the morning. And I typically would work out in the morning. And I just felt so good.

And I wouldn't actually get hungry until about three o'clock in the afternoon. And then between three and six or so I would eat a whole lot of food. I would eat all my calories. And actually I gained a significant amount of strength and muscle mass. I felt amazing. I felt incredible when I was doing this. And at the time, I actually thought it was the water. I thought, well, I'm just super-hydrating my body, and this must be why.

Now with the research coming out on fasting, I realize why, because at the time, as I started that, I was struggling with anxiety, with issues with concentration. And it was like that just went away. I felt so much better. I had always struggled with just challenges in maintaining muscle mass. And I didn't have that issue anymore. I was able to maintain my muscle mass easily with this. And I was sleeping better than I had ever slept.

So I noticed that I saw that improvement. It wasn't until years later that

people started talking about fasting. And even the term, I even came across the term intermittent fasting and it was like this is what I practice. And so, it just came intuitively to me. But it started with a gut issue. And so that's really how I got started with it.

And so, I know that you were talking about some people do better eating breakfast in the morning. So what would be some guidelines that you would give somebody when it comes to, let's say they have a gut issue, irritable bowel, auto-immune disease, or something like that that we've talked about, maybe acid reflux? What would be some guidelines that you would want to give with somebody when it comes to time restricted feeding? And you can also include other lifestyle habits, like really prioritizing sleep, exercise, things like that.

Mike: Yea, that's a great question. Yea, I think it comes down to your goals. For a lot of people, if weight loss is your goal, fat loss is your goal, we know that from the circadian rhythm, circadian biology research, that we tend to burn more fat in the morning. Actually, it's while we're sleeping, we tend to burn a lot of fat, actually. Our mitochondria are really active at night while we're sleeping. And fatty acid oxidation increases.

And we now know that people that do shift work, people that don't get good sleep, people that have sleep apnea, tend to gain weight. Well, that makes sense, because if you're not taking advantage of this time during the day when you're burning the most fat while you're sleeping, then you're going to gain weight, interestingly.

So what I would say to people is, again, if you're exercising in the morning and fat loss is your goal, then just try to do the one meal a day or kind of like back load your calories, like you were saying, Dr. Jockers, in the afternoon. For people with kids and you have a family, it makes sense. Like you want to be able to dine with your family. And so that's what I generally try to do.

But like for me personally, I do generally do like to have breakfast if I'm working out that day. I just find that I have a better workout. That's just me. I don't know why. I tried doing the workouts fasted and I just don't have the same energy. So I do more power lifting type movements and everything along those lines. So that's just my personal approach.

I just have a small little side story. So I'm doing a power lifting competition this Sunday. And like a couple of weeks ago, like ten days before the event you want to try and figure out what your max is and where you start, because you have three tries to do a squat, then a dead lift, and then a bench. And I was fasted. I just had like my Bulletproof coffee with a little butter and a little MCT oil. And my squat was at like 250. Normally I can get close to 300. I'm like what the heck is going on.

Because I was pretty much in the low state, just MCT oil and a little bit of butter, I went and got an apple. I came back and then hit like 280. And I was like, man, that context is important. Like we get into this state where carbs are bad, fats are always good. But like when you're doing something that requires like glycolytic breakdown and stuff like that in power lifting, I think it comes down to people figuring out what is their goal.

Don't just jump on to it because it's popular. Fasting is popular, keto is popular. Okay, cool. But why are you doing it, and what is the goal that you are trying to seek? And so if weight loss is your goal, you can backload your calories. If you have kids, backload your calories. There's nothing better for a child than everyone sitting around a dinner table. I know you have a routine where you talk about being grateful and things along those lines. That is key for instilling good eating habits. So that's what I would suggest.

But again, you can just try certain things. Like alternate day fasting like you referred to, that's very popular. I've run into several practitioners who all they tell people to do is just fast during the daytime. So say starting Sunday night at 5 p.m., have your last meal with your family. Have an early Sunday dinner. Fast Monday until 5 p.m. Eat normally as you would Tuesday. Do the same thing on Wednesday fasting, so you cut off early at say 6 on Tuesday. Don't eat again until 6 on Wednesday. Do normal eating on Thursday. Friday, you're fasting until dinner.

So just something simple like that can just kick start things in the right direction. And people don't realize how much time we spend thinking about food, cooking food, preparing food, prepping food. I mean it can become a total pain in the butt.

And a lot of us say, well I don't have time to exercise because I'm just so busy. Well if you can take out an hour and half or two hours of the day where you don't have to worry about prepping food, maybe you can squeeze in that exercise on that day. So that's what I would suggest, is getting specific about what your goals are and trying to figure things out.

And really be science based about it. So use things like the Oura Ring, which is here. It tracks for heart rate variability, and it tracks sleep. Go out and just go to Walgreen's or Rite-Aid or a local drug store and get a glucometer and test your glucose. See how your blood sugar is during the day. So maybe you eat breakfast and skip dinner, versus if you skip breakfast and eat dinner. So you know what's going to work for your own biology.

So that's what I would suggest to people. And I know people just want to know the protocol. Tell me what to do. But what works for me may not work for you. What works for you may not work for me, right? So that's

what I would suggest.

But I think having interviewed a lot of different people, having read tens of thousands of comments on the You Tube channel, I would say the majority of people do better by skipping breakfast and kind of back-loading the calories as you suggested. And I think there's a smaller percentage of people that tend to do better with breakfast and skipping.

The thing is once you start eating in the morning and you have breakfast, you're like I already ate anyway, so I'm going to have lunch. And then you're like, well I'm going to have dinner and then a snack. And it creates this kind of where you just end up consuming a lot more calories and so on.

Whereas, if you just say, look, I'm not going to have any food until 3 p.m., or I'm just going to fast until dinner, that's it. That's the only decision you have to make. So it almost becomes easier to do that back-loading method. So, yea, it's really personalized. But you can't go wrong with starting there, or doing the alternate day fasting. There's a lot of great research on that as well.

Dr. Jockers: Yea, absolutely. And I find that it's a little easier socially for people to do more of the carb back-loading. Specifically in our society lunch and dinner tend to be more of your social meals, as opposed to breakfast. And it's hard when you're in a social setting to miss the meal. Personally, I actually fast through dinner two to three times a week. But at the same, it's actually helpful. My wife actually likes it when I'm fasting, because I'm like helping my kids out more. I'm just focused on my kids.

And once you create habit around this, like for example on Wednesdays, I typically eat lunch. I just find that eating lunch I feel better. In the afternoon I'm more productive as opposed to if I fast through that period of time. I just don't feel as productive. And then I sleep significantly better that night, as opposed to if I fasted until dinner. That's what I have found actually for myself.

But also at the same time, I've been doing this for awhile. So where my wife might make a great dinner, and I'm there helping feed my kids, and I'm smelling it and it smells good. And part of me is like, this smells good, I'd like to have some. But the other part of me, like the deeper part of me, is like, no, I just know how good I'm going to feel by fasting here. So I'm absolutely going to fast. And it's a stronger sense, because I've been doing this for awhile and I know the benefits of it. I know how energy efficient, how mentally clear I feel when I'm practicing this on a weekly basis.

So a lot of intuition, playing around with it, and just following your intuition. I think that's a big thing that you're getting across here. Now

as far as a lot of people work late at night. You know, they might work until, let's say, seven or eight o'clock, come home, and eat dinner. So if somebody could control their environment, when would you say would be the last time they should eat? Like what would be the cutoff time to then get a really good, highly effective sleep?

Mike: Yea, that's a really good question. You know, I think give yourself at least three hours before bedtime. And so that's a tough thing. But I know a lot of people do work late, and I totally understand that, I mean if you're in the restaurant business, various social businesses. My wife sometimes is at the chiropractic clinic and will see patients until seven or eight o'clock at night. So on those days, she will bring food in with her and try to eat at like five, because as you just alluded to, and multiple studies show this about the timing of food.

When you go to bed on a full stomach, first of all your gut, just like we talked about our body and our microbes have this internal circadian clock, our gut has its own circadian clock. And it turns out that motility, pancreatic lipase release, bile release, stomach acid release, all these factors needed to digest and absorb food tend to decline as the day goes on. So they kind of peak around four or five p.m. and then will peter out.

And, of course, everyone's circadian rhythm is slightly different. But your gut is not super active at night. And so late night eating is linked with dysbiosis, the imbalance of the gut bugs that we're talking about. A simple strategy, I know daylight savings is coming on and winter is coming and stuff, and this is a great time to start fasting. We've know about this for a long time, and I alluded to the chickens and everything like that as a small example. But, you know, just try to eat during the daylight hours, if anything else.

If you're confused about where to start, and you're like I don't know, I love my breakfast. Okay, fine. Just eat during the daylight hours. And so when the sun starts petering down and the evening is coming on, you should probably have your last meal. And don't make it a huge one, because there's nothing that can throw off your sleep more than having a big meal, and you're rumbling. And that creates mal-digestion and other gut issues and motility issues and constipation. And it's a lot to deal with. So that can be just a super simple thing, is just eat when the sun's out, don't eat when it's not.

Dr. Jockers: Yea, I love that. That's a great recommendation. What I'll tell people, especially when you're trying to time out your eating window and your fasting window, say you want to do like a sixteen/eight or something like that, where you're fasting for sixteen hours. If you're somebody who does an evening job, then you might be the right type of person to eat breakfast and lunch, and then just fast in the afternoon

and evening. And that can be really helpful.

Have your largest meal maybe around lunch, take a nice siesta, and then go into work afterwards. Rest a little bit, allow your body to digest it well, and then go into work. And what you'll find is that like for the first day or two, you kind of miss that dinner. But your body adapts. That's the amazing thing.

Like we don't like change. But actually our body gets better with change. And so we adapt. Just like exercise, you know the first time you go in and work out, you're going to be really sore. You're going to be really tired. You're going to think exercise is terrible. But actually you get stronger through it. And so it's the same thing with fasting.

So if you do work that evening job, you're like well how do I do this? You know, I get home at nine or ten o'clock at night. I need to have something. I would say kind of a first like baby step might be instead of having a big solid food meal, maybe have a protein shake or something like that, like something easy on the digestive system. And then I would say the second step would be just fast. Maybe have some herbal tea or something like that. And eat breakfast and lunch as your meals, and have that as part of your fasting window. What do you think about that, Mike?

Mike: I think that's awesome. Yea, I mean it comes down to this customization, like you said, and I like this. But a lot of people follow the gurus and do exactly what gurus do. But again, unless you have that same exact lifestyle, biochemistry, and microbiome diversity, it's not going to work for you. So just totally feel free to customize. And you know, most people that are successful with any diet or really anything in life, any business, any exercise program, they're breaking the rules a little bit.

There was a study, I mean not to deviate the topic too much, but it was in elderly individuals at nursing homes. And the people that broke the rules and would do different things, like play cards when they shouldn't, lived longer. And so it's kind of interesting. We want to follow everything to a T. And I see this a lot with moms, with women. They want to do everything right. And everything is so perfect. Just tell me exactly what to do.

But just have the mindset that you need to like deviate a little bit, because it's a little bit different. And just remember that study in elderly individuals. When I read that, I was like that's so funny, because that was like my grandfather. He was always like doing things that he shouldn't have been doing, and he lived a long, great life, and everything along those lines. And so you don't have to break the law. Just you don't have to follow the rules to a T. Feel free to customize.

But going back a little bit to the mechanism, I just want to highlight one thing. You hit on that anti-inflammatory interleukin 10. You hear about cytokines and interleukins. They think they're all bad.

But interleukin 10 is anti-inflammatory. It can really affect the onset of, say, auto-immunity and allergies. It's a good thing. We want to have that to keep our immune system in a tolerogenic type state. And there were some studies showing that time restricted feeding and intermittent fasting in humans increased *Akkermansia muciniphila*. That's a type of genus and species of bacteria that degrades mucin that we want.

And then also *Faecalibacterium prausnitzii*, it's kind of a big tongue twister. But fasting increases those two bugs. And those bugs also increase IL-10. So I just wanted to let people know that we are kind of figuring out some of the mechanisms there. Endotoxin, like we talked about, is probably a big factor. But also the change in the gut bugs and their associated changes in interleukins and cytokines are part of the mechanism as well.

So people have heard about biofilms and things along those lines, where bugs can live in these biofilms and kind of create this layer that's impenetrable by our immune system. And so this *Akkermansia muciniphila* degrades that mucin. So we don't have so much mucus and film and yuckiness. So when you fast for a long period of time, the way that that bug literally survives is by degrading this mucus. So you have a natural way to kind of degrade biofilms within your intestine, which is pretty cool.

Dr. Jockers: That is really cool. When I had my microbiome studied here with uBiome, I actually had a lot of those particular bacteria in my system. And it's something I practice, obviously, intermittent fasting. So that definitely makes sense.

And you know, I also sent over that study, metabolism 2018 study. That was interesting as well, where they showed that intermittent fasting led to an increase in your lactobacilli, your *Bacteroides*, your *Prevotella* species. And they increased the antioxidant metabolic pathways. So it reduced overall oxidative stress throughout the gut.

And so I always think about it like just weeding a garden. You know, it's like we constantly eat. In a sense we're just constantly feeding the garden, but we're not actually weeding it. So everything grows, good and bad. When we fast, it's like we're going in and we're pulling out the weeds, which are kind of these opportunistic plants that grow and steal nutrients from the things we want to grow. So we're going in and we're weeding it out. And we're kind of customizing our garden. And that's what time restricted feeding and even doing a prolonged fast from time to time can do for our system, just weed out the garden.

Mike: It's a brilliant point. And folks at Cedars Sinai and UCLA that are working with SIBO, small bacterial intestinal overgrowth, I mean they frequently recommend an elemental diet, which is basically amino acids, and that's about it, and some proteins, to help to basically just starve out these bugs. And so a lot of people coming into this summit have heard about autophagy, the process where our cells can kind of engulf other parts that may not be as functional or defective. We know of mitophagy, where our mitochondria actually get engulfed, our defective mitochondria for example.

And now we can think about fasting as a strategy to really kind of get rid of bugs that don't need to be there. And those bugs are probably more susceptible to being degraded, the pathogenic bugs, if they don't have the environment or the milieu that fosters their growth. And it is most often times carbohydrate based foods and sugars and so forth.

So by just getting rid of all food for awhile and doing a periodic, I don't know about you, but long term fasting I do like once a quarter I'll do at least 3 days. It's a great way to just check in and realize like, wow, I'm craving food, but I'm not even hungry. I'm just craving food because I'm lonely. Or I just want food because there's some emotional trigger or something. Or just the habit, right? You realize that you go into your house, and people were going and grabbing pecans and Brazil nuts every time they came into the house. There are all these emotional triggers and different things.

So I think structuring in some prolonged fasting, obviously there are tons of health benefits that we know about physiologically. But on the emotional side, just being more aware of like what's triggering you to crave foods. And some people will comment on my You Tube channel and say, hey Mike, I just have these food cravings and I can't do keto. I'm like well, I just crave carbohydrates.

And I write back, is it like a low blood sugar thing? Or is it just emotional connection where it's just habit. Or maybe you and your father or you and your mother, or whatever, and maybe they're not here anymore, you would go out and have mangos. And so you're craving those mangos because you're missing someone. There's so much about our food choices than just like the macronutrients and so on.

And so I think fasting, and even just a 24-hour fast or compressing your feeding window, helps you kind of be more aware of these emotional triggers to food that we have and ideas around food. And it helps us to overcome that, so that we can achieve a stable, consistent body weight and long-term health.

Dr. Jockers: Yea, I totally agree with that. I think most of us get a hit. We get a dopamine hit of a feel good neuro-transmitter. When we

eat, it naturally stimulates that, which is a great thing. It kind of drives us to want to eat on a regular basis, which is necessary for survival of humanity.

But like you started this interview, you were talking about, hey, we've got food anywhere. You know, it's like I've got enough food in my house to last my family a week, at least, if not more. And we can literally eat around the clock because of how much food we have. Our ancestors didn't really have access to that. So when they did get food, they had to work hard for it. They would get this natural feel good mechanism that would reward them for eating and reward them neurologically.

And so kind of like sugar, cocaine, things like that, any sort of addictive mechanism, it's very easy to get addicted to food. It's all around us. It's accepted, whereas smoking, doing illegal drugs, things like that, it's not socially accepted in most circles, whereas this is. People don't necessarily know the risks. Especially if they aren't obese, they don't know the risks of continually eating, and eating all the time, and stoking these feel good, addictive neuro-transmitters.

And so when we take some time without stimulating those, it really helps reset our brain. It's one of the best things you can do for resetting your neuro-transmitters and resetting your senses. And you're absolutely right. Like doing a periodic three to maybe five day fast, something along those things, is such a powerful reset for that. And I'm with you. I do it pretty much every quarter, if not twice a year.

I just did one about a month ago, a four day fast. And on the fourth day, like I was going to go five days, but the afternoon of the fourth day I felt so good and so energized, it was like I've got to go lift weights. Like my body was saying I need to lift weights. Like I didn't work out during that period of time. And I went in four days fully fasted. Like I started fasting on Sunday. It was Thursday, and I was just as strong. I was going to take it easy. But it just felt so good. I was just as strong as when I'm fit. I felt so amazing. I wasn't even hungry afterwards. Now I did break it with a protein shake afterwards. But I wasn't even hungry.

And in a sense, I compare fasting to exercise. You start to build your fasting muscle as you do this, as you experiment with this. You might start with a twelve-hour fast between your last meal and your first meal. And then you might bump it up to fourteen and then sixteen and then possibly eighteen.

Or you might even do something like an every other day fast. You know, you've got to find what works for your schedule and intuitively what you feel like your body is needing.

For example, I was going to go five days because I'm like the fifth day is

when I get the massive stem cell increase. But my body said no, I want to lift weights now, and I want to break the fast later. And so I just listened to my body. I'm sure I probably got a significant amount of stem cells release, and it was enough for me.

But anyways, with that said, you've got to listen to your body. And as you start to practice this, you'll get more and more intelligent and stronger with it, where a two, three, four day fast won't be as intimidating. That's because it's something that is just built in as part of your lifestyle, and you'll actually crave the benefits that come with it, the renewed clarity, the mental clarity that you get, the freshness.

I know after I did that, for like a month I felt so fresh, and like I was recovering from exercise so much better. And my sleep was deeper, and it was like it was prolonged after doing that. And that's why I do them periodically. Typically every three to four months I'm doing an extended fast, along with the intermittent fasting strategy.

So with that said, Mike, this has been a great interview. It's just such great content. Any final words of inspiration for people that are listening? And also, where can people find out more about you?

Mike: Yea, great question. I guess to finish off on this exercise conversation, I think it's important to see fasting is a wonderful tool, but exercise, too, also increases autophagy and mitophagy, and all these mechanisms that we've been talking about link to fasting. Exercise does affect bacterial diversity.

And if we haven't mentioned it yet, diversity in your microbiome translates into stability. So the ecosystems are stronger and can withstand more ups and downs and ebbs and flows, which is a good thing. So I love exercise. Fasted can be great, too.

But I see some people, they don't exercise because they're doing so much fasting. And again, we want to balance things out a little bit. And so exercise can be a wonderful modality. So don't forget that. There's a ton of research on that.

And interestingly, some of the adaptations that occur from exercise, like muscle hypertrophy and losing body fat and all of that, is autophagy driven. And it's interesting how it works. So yea, I just want to finish off on that exercise as a lifestyle modality is key.

And track your sleep. Everyone should go out and if they don't have a glucometer, go out and get one. Obviously, ketone meters can be great. I know you love the Ketonix breath meter and so forth. There are a lot of great tools. But starting out with just inexpensive, looking at your blood glucose, looking at your sleep/wake cycles can be wonderful. So those

are kind of the final words of advice.

If folks are interested in connecting with me, I would love to connect with you. I'm pretty active on Instagram, at metabolic_mike. Or if you just type in Mike Mutzel, you will see my handle. And I'm on You Tube as well. And the channel is High Intensity Health.

Dr. Jockers: That's great. Yea, definitely check out his You Tube and podcasts as well. There are some really, really great interviews, including myself. We did a few interviews on there. But great input.

I love talking about exercise. You know, that's another thing we've talked a little bit about on this summit is just fasted exercise. And I know you said for you it doesn't work great. But I know for myself, I try to exercise at the peak of my fast. I just feel so good there, and I'm stimulating even more autophagy when I do that.

So like if I eat dinner, for example, like last night I ate dinner. I finished about six o'clock. And then today I worked out. It was about 12:30, and then I broke my fast after that. And so typically I just feel so good, so mentally refreshed when I do that.

So find the strategies that work best for you. Mike, again, thanks for the phenomenal interview. That was awesome.

And for those of you guys that are out there, I just want to remind you that fasting, we've been talking about this throughout the summit, it can unlock the dormant healing potential within you. It's safe, it's powerful, and it just might transform your life. So give it a shot.

And if you've been enjoying the interviews on this summit, then I want to encourage you to consider owning the entire Fasting Transformation Summit for yourself. That way you get access to the mp3s, so you can listen to this while you're working out, like Mike was talking about, while you're out taking a walk. You can also have the transcripts, so you can read through those. You'll have all the bonuses, everything for a lifetime.

And I find this particularly helpful if you are starting a fast, especially an extended fast, to actually be listening to interviews of people talking about the benefits of fasting. Fasting at times can be lonely, especially if you're doing it and you're the only one in your family. But listening to experts like I'm interviewing in this summit can be so helpful and so refreshing and just make you feel like a super hero while you're going through the fast and encourage you to follow through.

So if you would consider owning this for yourself, we would be so honored. And I know it would give you a lot of value. So we'll see you guys on a future interview. Be blessed, everybody.

Fasting and Inflammation

Guest: Dr. Peter Osborne

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. I'm your host, Dr. David Jockers.

And today, we're talking about fasting and its role with inflammation. We're going to talk about what inflammation is, how you can test for inflammation, different nutritional strategies you can do in order to reduce inflammation in your body. And we're also going to talk about the role of fasting and how it's able to downregulate certain genetic pathways associated with inflammation and just keep inflammation under control in your body.

And so our guest for this topic is Dr. Peter Osborne who is the clinical director of Origins Healthcare in Sugarland, Texas. And Dr. Peter, I brought him on for this because when I think about inflammation I think about Dr. Peter Osborne.

He's really an expert in this area. He has the bestselling book *No Grain, No Pain*. He's referred to as the gluten-free warrior. And he also travels around the world, serves on many different advisory boards like Functional Medicine University and the American Clinical Board of Nutrition. His practice is centered on helping individuals with chronic, degenerative, and autoimmune problems using natural methods.

And so, Dr. Peter, thanks so much for joining us for the Fasting Transformation Summit.

Dr. Peter Osborne: It's great to be here, Dr. Jockers. I'm happy to contribute.

Dr. Jockers: Absolutely. And so, Dr. Peter, let's get started with really talking about inflammation. And what are the symptoms that someone might experience if they have chronic inflammation in their body? And what is inflammation?

Dr. Osborne: Let's first start by saying that inflammation is not bad or evil. It's actually a necessary process in the body. And a lot of people have demonized it, unfairly so. I think differentiating chronic inflammation that is unresolved versus natural, day-to-day inflammation.

Inflammation is actually what our body does to break down old tissue, to break down old cells that are damaged and to rebuild those new cells and those new tissues. So we need inflammation kind of like a wrecking ball to tear down the old termite-infested house. We've got to have inflammation, or a wrecking ball, to knock that old house down so that we can build a nice, new house that doesn't have termite infestation.

So we use inflammation as a healing tool. The body uses that process. And so it's less to do with inflammation and more to do with chronic, unresolved inflammation that is outpacing repair. So when inflammation outpaces your capacity to repair, then your tissues start to break down. We classify that as diseases.

And there are a host of different chronic, degenerative, inflammatory diseases. Some of the more common ones that people have heard about are heart disease, diabetes, cancer, autoimmune disease. These are what we would classically consider the chronic inflammatory problems.

Dr. Jockers: Yeah, absolutely. And what are some symptoms that somebody might experience before they get the diagnosis along the way? Let's say they're in their 20s, 30s, and 40s. They haven't been diagnosed with anything. But they just don't feel good. What would be some symptoms they might have chronic inflammation?

Dr. Osborne: This is a big one because there are a lot of symptoms. And different people will react in different ways. Some people will experience chronic as brain fog or neurological problems, depression, inability to think clearly. So it can affect a lot of people. It can affect their minds. It can affect their brains.

For some people, they're going to experience it in the skin. They'll get diseases like eczema, psoriasis, other inflammatory skin conditions like chronic acne. So it can affect the skin.

It can affect the liver, creating elevations in liver enzymes. Even though that person may not have “massive liver disease” when they go in and get their general blood work done, their liver enzymes are coming back a little bit elevated because their liver is slightly inflamed.

For some people, they're going to experience inflammation in their bones. And it's going to lead to progressive bone loss. For some, they're going to experience inflammation in their joints. It's going to cause pain, muscular tightness. For some, in their guts, in their intestinal tracts. They're going to have chronic gas or bloating or diarrhea or gastrointestinal-like symptoms, things like heartburn or reflux.

So it varies from person to person. I would say generally as a rule of thumb—and I'm going to point something else out because some people don't know that they're inflamed because they've always been inflamed to an aggressive degree. So their normal is chronic inflammation.

And so if you're experiencing symptoms of illness early on in life, I want you to understand. That's not normal. Even though you may have already have been experiencing it your whole life, it's still not normal. And it's important to understand and try to get somebody to help you differentiate where that inflammation or where that problem could potentially be coming from or what could be causing it.

Dr. Jockers: Yeah, I totally agree. It's one thing to wake up, not feel great for one day. But when it continues to go on and on and on, you know that something's going on right there. And you definitely want to get to the root cause. So what are some labs that you like to run in order to find markers? What biomarkers are you really focusing on when it comes to inflammation?

Dr. Osborne: Well, I like to be extremely comprehensive when I'm looking into lab for people. I'll give the audience certain biomarkers that are simple to ask a doctor to run—something like an erythrocyte sedimentation rate (or ESR). Although you can get a lot of false negatives on a test like that, it's still one measure or one tool we have. There's another one called C-reactive protein. And I recommend if you're going to have your doctor run a CRP (C-reactive protein) that you have them run a high sensitivity CRP. It's just a little bit more accurate. It's going to catch inflammation where a regular CRP test may miss it.

I'm also going to encourage people to have testing. There's a type of test called an MMP which is another marker or measure for inflammation. You can have your doctor measure something called tumor necrosis factor-alpha. You can have your doctor measure interferon-gamma. These are just different biochemical markers for inflammation.

Homocysteine is another good one. It's a marker that can indicate

vascular inflammation as caused by B vitamin deficiencies.

Homocysteine will be elevated when we have deficiencies of folate, vitamin B12, vitamin B6, vitamin B2. So it's one of those markers that can give you more than just one piece of information.

But ultimately, I want you to understand that inflammation is controlled in a large part by what we're exposed to, by what we eat, by how we sleep, by the nutrition that we receive from the food that we're eating.

So if you really want to be accurate at assessing whether or not a person has the potential for creating a greater degree of inflammation than they are a greater degree of repair, you've got to check your nutritional status. So measuring vitamins, measuring minerals, measuring plasma amino acids.

These things are very, very important because if a person, for example, has a deficiency in omega-3 fatty acids, omega-3 fatty acids are one of the primary regulators of the normal inflammatory response. And when they're low, a person makes more inflammation than what they need to do the same work. And so again, they become repair deficit in a sense.

So you want to make sure and ask your doctor to measure your nutritional status—your vitamin D, your vitamin A, your zinc, your chromium, your copper, your B vitamins, the whole gamut. There are about 40 different essential nutrients. And to me, if you're really going to truly assess inflammation at its core cause, you've got to measure nutritional status.

Then you also want to measure things like food response because food can create inflammation. So having food measured is very, very important because you could be eating blueberries—I once had a patient who was terminal because of a blueberry allergy. A blueberry allergy which is a healthy food! It's a super food. But for this person, it wasn't. One man's food is another man's poison. So measuring food can sometimes be a very, very keen insight into what might be creating or triggering an inflammatory response or hyper inflammatory response.

And we also have chemicals in the environment. So measuring those and avoiding those as much as possible. So take common sense measures to avoid them. But if you want to measure them, you can actually measure food additives and food preservatives and food dyes and whether a person is reacting to certain things that might be in their cosmetics or their shampoos or their soaps or their detergents because, again, a lot of these products can be natural. But if you're reacting to them, then it could be a source of creating inflammation.

So not just measuring the outcome, which is the inflammation, because

then you have a question mark. I'm not a fan of saying, "Hey, you're inflamed," but not having the answer as to why you're inflamed because having a positive CRP test which shows inflammation doesn't tell you why the inflammation is there.

So instead of stopping at, "You have inflammation," let's instead say, "You have inflammation, and these are the reasons why." So if we can measure chemicals, if we can measure food, if we can rule out infection and we can rule out vitamin and mineral deficiency, then for most people, those are the big causes for why the inflammation might be there. So I highly recommend looking into those things as well.

Dr. Jockers: Yeah, totally agree. Want to get to the root cause and solve it from there, not just see if there's inflammation. But clearly, that's a huge topic in today's society, just getting to the root cause of chronic inflammation. And so what sort of lifestyle strategies can people start to apply to reduce inflammation in their body?

Dr. Osborne: There are a lot of strategies. And these strategies are generic. But for most people, they're going to work. And one of the strategies is certainly making sure you sleep adequately. Inadequate sleep is one of the biggest triggers for aggressive stress hormone release that causes a cortisol elevation that can make blood sugar problems worse. And it can cause and trigger an inflammatory response. So lack of sleep is a big one.

And sleep is free. All you have to do is set up a habit around going to sleep at the right times, even if you consider yourself to be a night owl. Humans need sleep between 10 pm and 2 am and preferably longer on either side of that 10 to 2 block. But it's a very, very important timeframe to make sure that you're sleeping.

Regular sunshine because it helps you produce melatonin. Melatonin is an anti-inflammatory. A lot of people don't realize that. It helps with sleep. But it's also an anti-inflammatory. Sunshine also allows you to get vitamin D in a natural way. And vitamin D is an anti-inflammatory. It helps regulate the immune system's response.

So when you have an over aggressive immune system, like in the cause of autoimmune disease, that can actually be caused by vitamin D deficiency which can be overcome. And it's free. It can be overcome by just taking and making an effort to get out in the sun on a consistent basis.

Again, the rule there is use common sense. Don't go out and burn. Go out long enough that you can tolerate it without burning. But get it on a regular, daily basis. And know that any sunscreen greater than SPF 8 is going to inhibit your skin's capacity to produce vitamin D. So it's very,

very important that if you are trying to get that sun that you're not just lathering up immediately before going out. So sunshine and sleep are both free.

Eat real food. Now, some people can be allergic to real food. And that's okay, too. But it's a great first step that doesn't cost you anything. It's just not eating processed, packaged foods and sugars, not eating the hydrogenated fats.

These are just very basic, very, very simple things that if you abide by the rule of eating real food, getting plenty of sleep, making sure you get adequate sunshine and drink plenty of water, you're going to go a long way to helping normalize an inflammatory response in the body. And again, those things don't cost you anything.

Now, if you want to talk about things that can be more dialed in, we can get into that. But I wanted to give the audience some things that they could take home right now today and start applying.

Dr. Jockers: Yeah, I think that's beautiful, just the low hanging fruit. Really optimize your sleep. I've heard that for every hour of sleep you get before midnight, it's equivalent to three hours of regenerative sleep after midnight. You just get such a greater boost in human growth hormone production. It's just so good for your circadian rhythm. So yeah, good sleep. Getting out on the sun on a regular basis.

I'd also add in just going out and grounding, getting your bare feet on grass, dirt, sand, maybe hugging a tree or something like that. Just getting out in that healthy electromagnetic frequency from the earth can be so healthy and healing and really doesn't cost you anything which is one of the profound things we talk about with fasting. And we'll go into that in a second.

Now, when it comes to an anti-inflammatory nutrition plan, I know you specialize in that. Obviously, it needs to be customized for everybody. But what's the base template you use for that?

Dr. Osborne: The biggest triggers that I've seen clinically over and over and over and over again. Number one is chemicals in the food. So avoid food dyes, food preservatives, and avoid processed foods, especially those that are genetically modified or that have pesticides, herbicides, and other residues in them.

Again, go back to real food is rule number one. But real, organic food. And it's sad that we have to say that, isn't it? To say the food that you're going to eat needs to be not contaminated. And then it costs more to not contaminate your food. But that's where we're at in our world. So buying real, whole, organic food is step one.

Now, there are certain categories of foods that we see that can create a lot of inflammation. And one of them is the family of grains. And there are several reasons why. Some people think that the only reason why grains create a problem is because of the glyphosate. And the glyphosate is certainly an issue. But it's far deeper than just glyphosate.

We've got gluten. And many people are gluten sensitive or gluten intolerant. But we've also got grains. The way they're stored and the way they're produced have a tendency to harbor mold and mycotoxins. And many people are allergic to mold. And mycotoxins aren't good for anyone.

A lot of your grains if you're overconsuming them—most people are. Food Guide Pyramid in this country is a solid base of grain. And when you overconsume grain, you're overconsuming omega-6. So eating too much food with high levels of omega-6 fatty acids skews the balance of omega-6 and omega-3 fatty acid ratio and favors toward the side of inflammation. So those are just some of the qualities about grain as a whole that can contribute to inflammation.

I won't harp too much on grain because you can read *No Grain, No Pain*. And there are 300 medical references in that book that can really guide you in a much more specific arena.

But dairy is another big one. Dairy, we're bombarded from youth. Grain and cereal. Pour the milk on your cereal. And the problem with the milk is the cows. It's what the cows are being fed. Cows are not designed to eat grains that are contaminated with pesticides and mycotoxins. It doesn't make a healthy cow.

So when you take an unhealthy cow and milk it, you don't get a healthy milk product, especially when you're also adding things like recombinant bovine growth hormone and you're creating a miserable lifestyle for that animal. Just think about yourself. If we locked you away, away from your family and away from your friends and isolated you, you would not be a happy individual. And those farm animals on those scale factory farms are not healthy. And they're not happy. And that's part of the reason why. You can't extrapolate a healthy food from an animal that's in poor health.

And so dairy, aside from that, a lot of the way that it's processed, the microbial transglutaminase from meat glues that are added to dairy as a thickening agent can actually make the dairy protein look like gluten. So for people with gluten sensitivity, we get this cross reactivity between dairy. Even if it's grass fed dairy, it can still be processed with meat glue. And that can still create this type of reaction. So for many people, dairy is just out. It's a big no-no.

Another one is the obvious. It's sugar. Corn sugar, cane sugar, beet sugar. Those are the three primary forms of sugar made in the U.S. I'd say today in the U.S. predominantly it's corn. Corn syrup or corn fructose, if you will, high concentrated, high fructose corn syrup which is very detrimental to the liver. And remember, the liver is a very important organ in how it helps us deal and cope with toxins and inflammation. So if you're eating a lot of processed sugar that's tying the liver and its resources up, it really is going to impact and affect the way that your body can take care of inflammation.

So dairy, grain, and sugar. Three big food groups for most people that I see that are struggling with chronic autoimmune conditions. And we can throw in or tag in there, too, the nightshades, things like eggplant and tomatoes and potatoes. Many people react to this. And not all people, but many people do. So it's a category that generally speaking, for many people going nightshade-free along with grain, dairy, and sugar-free is very, very helpful at mitigating chronic inflammatory processes.

Dr. Jockers: Yeah, it's a pretty good overview, Dr. Peter. And so let's talk about fasting. How does fasting help to heal leaky gut? Maybe you could talk a little bit about leaky gut and how fasting can help to reduce stress on the gut and reduce chronic inflammation overall.

Dr. Osborne: A lot of doctors will make the claim that all disease ends and begins in the gut. And although I agree with that to a large extent, it's not always true. But we do start from the premise of what goes in the mouth is what your body can take as a resource to use in the maintenance of the frame.

So your body needs that fuel—the carbohydrate, the fat, the protein, the vitamins, the minerals, the other plant-based phytonutrients and chemicals. Your body uses those fuels to heal, to repair, to maintain itself, to go about the normal daily business.

And so what happens with many people is they're eating food from the sugar, the dairy, the grain. And those foods are very low in vitamins and minerals. They're very low in micronutrients. And so what they're actually doing is they're eating a food that's high in calories, that's low in nutrients. And their body is not getting the nutrition that it needs to deal with the day to day.

So slowly, what happens over time is the more that happens, the body loses its capacity for repair. So things start to slowly break down. And when things start to slowly break down, how do we fix them? Well, we need vitamins and minerals and nutrients to fix them. But if we're not eating the foods that contain adequate quantities of those things, then that disrepair continues on.

And one of the other fundamental mistakes people make is they overconsume. So not only are they eating poor-nutrient-dense foods. But they're eating too many of them. They're eating too many calories as a whole.

And when we look at dairy and we look at grain, which are the two predominant staple foods in the United States' diet, both of these, even if you took them in their healthiest versions, are still relatively hard for the human digestive tract to process. There are proteins in grains like amylase trypsin inhibitors. There are proteins like gluten and lectins that are hard to digest.

And when 70, 80% of your calories are coming from food that's a burden on the gut, that puts a huge burden on the gut. And that food is not providing vitamins and minerals which would actually help the gut deal with that burden. Then what happens is you create a scenario in the GI tract where it's in overwhelm. Too many calories. Not enough nutrients. Too many foods that are hard to digest. And now we have this overwhelm situation.

Let me give you an analogy. Imagine you go home from work every day. And you cook your food. And you prepare everything. And you eat. But you never do your dishes. So the dishes just keep mounding up in the sink. And eventually, they start spilling out of the sink. And before you know it, you've got critters running around, eating the debris of the food because you're not taking care of it. And you've got a huge mess in your house all because you just didn't do the dishes.

That's what happens in the gut. When you put too much in and you don't have normal housekeeping, then the gut becomes so overwhelmed that it breaks down. And now it can't process anything. And you hear the term "leaky gut." That's basically what happens. The gut is overwhelmed. And those seals in the gut lining start to break open. And now all that junk, all that debris, all that stuff that's not good for you has access to your bloodstream and to your liver immediately.

And remember that your gut is supposed to be a quarantined tube. From your mouth to your anus, your gut is a quarantine zone. And its job is to separate good from bad, poop out the bad, keep the good, not to hold onto everything because it's overwhelmed and then spring a bunch of leaks and allow all the bad and the good in. And that's where that chronic inflammation comes from.

So if we're setting the stage for chronic autoimmune disease, that's most people's scenario. They overeat. They overeat foods that are highly caloric but low in nutritional value and hard to digest. And so they create a complete disruption of their gut lining and their gut's purpose. And now, they have basically bacterial poop, viral poop, yeast poop, and

food poop, debris leaking into their bloodstream. And now, their liver becomes overwhelmed. And then their skin becomes overwhelmed. And it's just a big mess.

Dr. Jockers: Yeah, it's a vicious cycle, absolutely.

Dr. Osborne: So where fasting comes in is you're letting the gut take a vacation. So another analogy. If you go to work and your boss says, "Thanks for working your eight hours today. But I need you to stay another four hours."

And you're like, "I'm tired." But you stay anyway.

And then at 12 hours, your boss comes up and says, "You know what? I'm going to need you to pull a 24-hour shift."

And you're like, "Well, okay. I've got to feed my family." So you stay that 24 hour shift.

And then your boss comes back at you and says, "You know what? We're just going to need to keep you on for the next two days."

And every time you think you're going to get a break, you don't get a break. And so eventually what happens is your energy, your mental prowess, all of that just fundamentally breaks down. And then you can't function.

And that's what happens to the gut. It's just been worked too long. So when we fast, we allow the gut to go home and get a good night's sleep and repair itself and excrete and expel the waste so that it can take on the job of the next day.

Dr. Jockers: Yeah, I love that analogy. I always say it's kind of like if you're trying to heal from a broken ankle and you're walking on it all day, you're not going to heal. You've got to get the crutches. You've got to lay it up. You've got to get rest. And that's really what fasting does, helps to just reset and then enhance the healing process.

Now, how can fasting help to reduce inflammation throughout the body too?

Dr. Osborne: Well, again, going back to the source of where the inflammation is coming from. If that source of inflammation is from a leaky gut, you're taking away what's leaking into the bloodstream. So if what's leaking into the bloodstream is creating the inflammation, when you're fasting, it's a stop gap. You're stopping things from coming and leaking through.

If that inflammation is coming from food, then you're stopping the intake of that food. And therefore, you're not creating those antigen/antibody responses. You're not creating those inflammatory chemicals, if the immune system perceives that food to be an enemy, that it would create.

So fasting stops any kind of food-induced inflammation. It stops any kind of leaky gut penetration. And that's where it can be the most effective in terms of why it causes a reduction in inflammatory.

Now, that's just the physical component of it. There's also a biochemical or more nerdy component which the effect that fasting has on a number of our hormones. So when we fast one of the things that happens is actually our insulin levels start to drop. And so many people are inflamed.

And when you're inflamed you gain weight. Obesity is not healthy. I don't care who you are, how comfortable you are in your own skin. If you are overweight and obese, it is an inflammatory disease that is going to slowly dwindle away at your health. So if you have chronic elevations in insulin because you're overconsuming calories, which is what happens to a lot of people, understand that insulin as a hormone causes visceral weight storage. It stores fat around your heart and around your intestines.

One of the benefits of fasting is it reduces insulin and allows your body to tap into those inflammatory fats and burn them off as energy so that they're no longer increasing the inflammation around your heart and in your intestinal area. So one of the effects on fasting is that it will reduce your insulin level.

Another hormonal effect of fasting is that it can actually elevate your mood. It can elevate your dopamine levels in your brain and in your gut because, remember, 60% of your dopamine is made in your gut. So fasting elevates dopamine which can enhance your mood.

And when we have an improved mood, we have a greater capacity for energy, a greater capacity for exercise, a greater capacity to make healthier decisions because if your mood is depressed, you tend to make bad decisions. You don't exercise. You don't want to go outside. You don't want to talk to other people and be social. You isolate yourself. And that's a very unhealthy thing to do. So fasting can elevate your mood and change your choices as a result of that mood elevation.

Fasting can also help to restore neural synapses. So we have neural synapses in the brain. We have neural synapses in the heart. We have neural synapses in our gut. Our gut is what we refer to as the second brain. It has more neurons than the entire spinal cord. And so there are

a couple different hormones that are released when you fast that allow these neurons to communicate more efficiently and more effectively.

And so again, without fasting and overconsumption of calories, you can bog those neurons down. They don't do as well. And that's why people get sluggish and constipated in their guts. And that's why they get sluggish and constipated in their mind. They can't think clearly. They develop brain fog.

Dr. Jockers: Yeah, really good stuff. Really good stuff. And so what are some fasting regimens you've had success using with your clients?

Dr. Osborne: Always start with what the client can tolerate. So especially women, because women can be more prone to having trouble fasting. And it doesn't mean that women can't fast. It just simply means you want to be careful. Some women don't do well with fasting at all at first. And it's because of blood sugar dysregulation.

If you're fasting, one of the hormonal responses is that your cortisol goes up when you're fasting. Cortisol is a hormone that's secreted by your adrenal glands. And it tells your liver to dump sugar into your bloodstream. It's because you're not eating. So there's no blood sugar. So your blood sugar drops. And that cortisol comes out to tell your liver to put sugar in your bloodstream.

And some people who are under tremendous stress that already have adrenal fatigue don't do well when they fast. It actually causes an hyper, or an exaggerated cortisol response which causes weight gain and bloating. And it can cause more fatigue and more brain fog.

So the first step is if your blood sugar is good and if it's very well managed—so you can have your doctor run tests like hemoglobin A1c and fasting insulin and blood sugar levels. There are other tests like C-peptide. One of my favorite tests is an intracellular glucose-insulin interaction test that tells us about how well your insulin and your sugar are communicating together. And then there are other types of things that you can do like nutrients that are involved in blood sugar regulation. Like chromium and zinc and B vitamins are important for this.

So if all that's dialed in and you've got pretty good blood sugar regulation, then fasting is a great tool. And I start people on a 16:8, a 16-hour fast with eight hours of eating. And this is not a caloric restriction diet. It is just simply a time restriction where we're limiting the time that you eat your meals within an eight-hour frame. So generally what that means is a very early dinner and a brunch instead of a breakfast.

So think of it as if you eat dinner at 6 pm, somewhere in that

neighborhood and then you wake up at 6 am in the morning, you've already fasted for 12 hours. So you really only have another four hours to wait until that first meal. So that would come sometime around 10 o'clock if you're eating a really early dinner. So that's a 16:8 strategy.

I always start people there because I want to see how well they tolerate fasting. And if they do well with that a couple of days, if we really want to try to expedite the healing process, we can go into a 24-hour fast. And if we really want to expedite the healing process, where the real magic happens is in five days.

Three-day fasts can be pretty good because there are a number of different things that happen when you fast 36 hours. There are a number of different things that happen even more greatly when you fast 72 hours. And then when you get into the five-day parameter, what we see is massive, what's called autophagy which is your cell debris, your broken cells, your old cells are rapidly being removed and being replaced. You can actually see in a good five-day fast a complete replenishment of the immune cells.

And that's very important with autoimmune disease because if you've got all these circulating immune cells that are hyperactive and hyper responsive, we want to clear those out of the circulation.

But again, the problem with many people who are chronically ill is they can't yet tolerate a five-day fast. So start with a 16:8. Before you do that, make sure that your blood sugar is being well regulated through a fast and has the potential to survive that fast without just creating more of a hormone imbalance and problem with you.

And if you tolerate 16:8, try a 24. And if you tolerate a 24, you can 48 or three days. And then expand that out if you would like to. Again, it's a voluntary thing because not everybody is capable of wrapping their mind around wanting to go five days without food. But it can be very liberating.

But it also, in my opinion, should be monitored and should be done strategically because if you go too long and you're trying to do too much, you can get yourself in trouble. So again, if you want the ultimate fast, five days is where the actual magic happens in terms of resetting the immune system in autoimmune disease.

But if you're going to attempt that, do it under medical supervision. And make sure that your blood sugar levels are where they need to be and that you're capable of maintaining normal blood sugar without a hyper cortisol excretion.

Dr. Jockers: Yeah, super important. Really great suggestions there. And

I'd also say if you're going to do a longer fast, at least for the first time or two you're going to do that, don't plan anything stressful during those days either. Plan to rest a lot. Plan to get out in the sun like you were talking about. Try to rest and sleep a lot. You don't want a lot of stress when you're trying to do that because it's new. It's something new your body has to adapt to. So it's a stressor of its own that your body has to adapt to.

I'm actually in the middle of doing my fourth five-day fast. At this point, it's no problem. It's been fairly easy for me. The first time I did it, it was a little bit of a shock on my body. And so just like exercise, you've got to get used to it. And you've got to work your way up. So I love your strategy there, starting with that 16:8 and just seeing how you tolerate that first and then going from there.

So just taking incremental steps I think is super, super important. And certainly, especially if you have a major health condition, working with a healthcare provider on this is going to be very important as well.

And so, Dr. Peter, this has been an incredible interview. You've given us so much great information on inflammation, nutrition, nutritional strategies for inflammation, leaky gut, and really diving deep on fasting there. And so what are some final words of inspiration that you want to leave with our listeners? And also, where can people find out more about you?

Dr. Osborne: A couple of things. Number one, I wanted to address, just quickly, some people who are underweight because that's one of those areas where they can lose more weight if they try some of these extended fasts. There's a strategy where you can use amino acids during your fast.

And I would highly recommend that any of you who are worried about weight loss or underweight use essential amino acids as a supplemental during the fast. It will help raise your blood sugar a little bit. But it will allow you to give your gut a break. But it will also supply the building blocks for healing and repair.

So beyond that, seven strategies that I always recommend. We talked about a few of them. Sunshine is free. Sleep is free. Exercise is free. Clean air is free. Water is free. Well, you kind of pay for water if you have a water bill. And eat real food, which we talked about.

And then the last strategy is you've got to be spiritually sound. And whether you're Christian or whether you're not, you've got to be around people who love you, who care about you. You've got to have supportive emotional relationships around you to get through and break through chronic illness.

So those seven strategies are what I would leave the audience with. And if you are ever struggling in your health, just ask yourself, “Am I doing those seven things on a consistently, daily basis? Or is there somewhere that I can improve?”

And if you want to learn more about what we do, the *No Grain, No Pain* message, you can visit GlutenFreeSociety.org. We have an excellent gluten-free survival kit, free to you. You just go there, sign up for our newsletter. We'll send that free survival kit to you where you can dive deep on all the elements of how to go gluten free properly, the pearls and the pitfalls of the gluten-free diet, etc. So you can find more information about us there.

And if you're interested more about our clinic outreach and becoming a client and coming on and seeing us, you can visit me at DrPeterOsborne.com. And there's a big tab there that says “Origins Healthcare.” That's our clinic. If you just click on that tab, you can learn more about what we're doing here.

Dr. Jockers: Well, thanks so much again, Dr. Osborne. You are certainly an expert in inflammation. And I just really appreciate you being a part of this summit and just everything that you're doing for the functional medicine community and the natural healing world and getting this message out. So thanks again for being a part of this.

And for all the listeners, I'm going to leave you with this last thought. Fasting truly can unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life. We'll see you on a future interview. Be blessed.

Fasting to Heal Chronic Infections

Guest: Dr. Jay Davidson

Dr. Jockers: Well, welcome to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind, fasting. I'm your host, Dr. David Jockers. And I'm really excited about my good friend today, our guest, Dr. Jay Davidson.

And Jay Davidson is in functional and natural medicine. He's basically a doctor of functional medicine and really specializes in chronic infections and chronic Lyme disease. You may have seen him on some of the different summits, like the Fasting Summit 1, 2 and 3, right--you've done three of them--Parasite Summit, Detox Summit. So he's well equipped in all of these kinds of topics right here.

And today we're going to really talk about fasting and chronic infections and how fasting can be a helpful therapy for helping people overcome chronic infections. And so Dr. Jay, tell the audience your story of how you got involved in the parasite, chronic infections, and Lyme disease world.

Dr. Jay: Yea, yea. So I hosted the Lyme Disease Summit, number 1, 2, and 3. I'm letting you do the fasting stuff. But I got into the Lyme disease world based on my wife's story. She had a long, I don't like word battle, because I feel like we're on the side of our body, but so many use the word battle.

And she had Lyme disease when she was seven years old and went into a coma. And basically from that point forward she was there in a coma for basically six weeks. And they figured out it was Lyme disease and

gave her IV antibiotics, oral antibiotics and that went on.

And then health issue after health issue just kept popping up. When before, leading up to that whole seven-year-old time period, her mom said, oh, she was perfectly healthy and just everything was going great. And then of all sudden something shifted.

Well when I met her, there were health issues, but she just never wanted to rock the boat. She was sick of being a guinea pig. And so we did a lot of health things, what we thought, detoxing, eating good food, juicing, Vitamix, exercise, burst-surge training, all of these things that you and I have learned over the years. And we were getting by. And then when my daughter was born, now a little over six years ago (she's six to six and a half), the bottom fell out.

And that's when it really made us figure out, okay, what's going on. And we realized that chronic Lyme disease had come back. It never really left. We had just never really fully dealt with it. We realized that heavy metal toxicity was there, rampant. These other chronic infections were there because of this poor environment within her body. But we were doing enough lifestyle to get by.

But then when that stressor of my daughter when she was born, that's when the bottom fell out. And that's when we were like, okay, we have to go upstream. We've got to get to the source. Otherwise, it's going to be like this broken record, just replaying, kind of getting by and then crash, getting by and then crash. And that's really what shifted my focus for sure.

Dr. Jockers: Yea, absolutely. When you see it right in your own household, it absolutely shifts your focus. And so what kind of chronic infections--you mentioned Lyme disease, obviously; you're also an expert in parasites. What kind of chronic infections are you seeing really commonly in your clinical practice with you and your team?

Dr. Jay: Yea, well you look at the big four categories. And you can categorize them differently, depending on, because I'll say parasites and I'll think of more like worm and microscopic parasites. But technically bacteria, fungus, and virus, they are parasites, because they are like living off of you. But I like to think of parasites as one category.

I like to look at bacteria, which you can find Lyme disease and the different forms of the Borrelia that cause Lyme disease in that category. There are rickettsial infections, Ehrlichia, Bartonella, which is a very common one to cause leg swelling, lymph issues, headaches, brain swelling, these kind of different types of symptoms.

So you've got parasites, you've got bacteria, you've got virus. And within the viral category, which is becoming more known in how big of an issue

this is, are the retroviruses. Retroviruses are basically ones that will embed their DNA into our DNA, and then now our DNA has retroviruses in it. So that's why they call them retro. They just basically just work reverse of a typical virus. So we've got virus and retrovirus.

And the last category I would put is fungus. And fungus, one of the big ones that I see that cause massive crashes with people is mold, mold in the house. Whether it's *Stachybotrys*, *Aspergillus*, *Wallemia*, I mean there's just a ton of different molds.

And when you run into a family and somebody is really struggling, and it's like well it can't be the house, because everybody else is doing fine, well different people are susceptible. And the more weakened your immune system is, the more stress you have going on, sometimes your genetics can predispose you. You know, that person could be really down and out because of mold.

But also in the mold category, we're seeing *Candida*. You know, this thing is constantly there until you remove the source, which is really heavy metal toxicity, that one. So I would say those are kind of the big four categories of the chronic infections that I see clinically.

Dr. Jockers: Yea, absolutely. And so you're absolutely right. Typically when we think of parasites, we're thinking of worms and larger parasites. But really all of them are living off of us. And so what are some of the symptoms that somebody may experience if they have a chronic infection?

Dr. Jay: Oh man! Let's look at the parasite realm, because I feel like parasites are the most important thing to look at, because all the other chronic infections can live inside of parasites. So viruses, bacteria like Lyme disease, have been shown to live inside of nematodes or parasites. Mold spores will live inside of parasites and replicate. So even if you clear the environment out, you can still be mold toxic, because there are parasites. It's the same thing with *Candida*.

So basically if you look at parasites, almost think of it as, you know they used to always talk like about terrorists. You find that mother cell and then it takes care of the other one. Parasites are the thing that you have to get to first. But then you can knock down the other things. And parasites, the biggest symptoms, I mean man, they're so many.

I'm not a big fan of lab testing. Parasites produce an enzyme when they die that dissolves their bodies, or some of them do. So it can make it hard to detect. A lot of the labs just don't take the time. They'll blast through twenty stool samples in an hour. So they'll give your sample maybe three minutes at most to look through. And then I just don't feel like we're trained in the U.S. to really look for parasites, because it's like, oh, it's a third world country issue.

But parasites are found in the soil. They're found in the air. I mean you can sneeze and catch a pinworm egg, which is really gross to think about. They're found in the water supply, salad bars. I mean you have pets that lick your face. You sleep with pets. I mean you're in the child care. I mean you're just predisposed to getting them, because they're everywhere.

So when I look for parasites, our good friend, Dr. Todd Watts, he's got his famous test of parasites. He's like take two fingers. See if you can find a pulse. If you can find a pulse, then that's a positive for parasites. That is very sarcastic, but at the same time I feel like it's pretty accurate, because it's a big issue and it hasn't been dealt with.

So common symptoms are restless sleep, where you toss and turn. Those critters, think of parasites. They get active at night. So they like to basically stress you out. They jack the cortisol up, so it can make it hard to sleep at night. They can cause restless sleep issues.

Skin problems, I had the worst skin issues. Really finding this parasite realm, it was kind of finding my own journey, getting these huge worms out of me and just piles of them. And looking back at all the different symptoms I had, I'm like, wow! If I would have just known, instead of getting all of these allergy shot injections, antibiotics, and all this stuff that I went through in my past. If I would have just cleared parasites out, I think I would have had a different childhood. But it gives perspective. So skin problems big time with parasites.

SIBO, small intestinal bacterial overgrowth, parasites are a big piece of that. I have seen tons of SIBO cases clear up just by parasite cleansing. Abdominal pains, like the cramping. You wake up. Oh my God, I've got to poop right away. That's pretty classic for parasites. Itching butt, or what they'll usually call like rectal itching, anal fissures, or like hemorrhoids, that's pretty classic for parasites.

Grinding of teeth, so, you know, your jaw clenching or grinding of teeth at

night, that could be parasites. Picking at nose, especially kids like the boring, where they're just digging and digging and digging, scabby type boogers, that's typically always parasites.

Nail biting can be a parasite sign, like the internal stress going on and chomping on the nails. This is more known for like chronic smokers. But you get the vertical lines above the lip. Also, if you rule out that the person is not a chronic cigarette smoker, that is pretty classic for parasites, to have those vertical lines above the lip. That's more of a physical diagnostic tool.

Really dark purple bags, I mean just dark purple bags are classic for

parasites. I had the biggest ones as a kid. People used to think I got punched in the eye, they were so bad.

Allergies, night sweats, anemia, iron deficiency, B6 deficiency, zinc deficiency would really fall into the category of, I'm blanking on it. They always blame it on genetics now, the B6 and zinc deficiency. Yes, KPU or pyrroluria. So that's really more a parasite we see.

Bed wetting--parasite. There's loss of appetite. Then I kind of have got the other spectrum here--hungry all the time, like bottomless pit. Eat, eat, eat, rail thin--think parasites, because they're stealing your nutrients. There's drooling while you sleep.

And then maybe one of the last ones I can think of right off the top my head here, eye floaters. So if you're kind of looking at maybe a white wall for instance, and you kind of see little things floating across, eye floaters, that's pretty classic for parasites.

Dr. Jockers: Hum. So a wide range of symptoms, that's for sure. And a lot of really common things that people overlook. And so what role can fasting play in just reducing the overall microbial load and helping to reduce our parasite load?

Dr. Jay: Oh, it is an amazing tool, Dr. Jockers. You know, fasting is one of those things that can starve the microbiome down, the bacteria. I always think of it in simplicity terms. You have good bacteria, bad bacteria, and you have kind of like the in-between commensal that will kind of go either direction, depending on who's stronger. I like to just call them the squatters.

But when you're really focusing on rebuilding your digestive tract, focusing on rebuilding your gut, which is such a cornerstone for the body, absorbing nutrients, the immune system, all of that, so much attention goes to eating like fermented foods and probiotics. But if you think about your back yard and it's all weeds, you know the key isn't just throw grass seed out there, which would be probiotics. The key is we want to bring the weeds down.

Now most of the population would bust out Roundup. And, of course, we would both cringe. You know, busting the pesticide out. So we're looking at, okay, what can we do naturally? Maybe rototill and then plant some grass seed and what not.

And that's what we really look at fasting for. You're going to starve the bacteria out. You're going to starve the weeds down. You're going to like basically cause a drought, essentially. And you're going to make empty spots, so that when you actually put grass seed out there, eating good fermented foods and probiotics, now we actually have space to grow better bacteria and really create a better microbiome.

In the gut, there are viruses, there's fungus, there's bacteria, there's parasites all in the digestive tract. So it's this whole environment that has to work together. But I'll classically get asked the question, well Dr. Jay, what should I eat while I'm parasite cleansing? You know, I hear papaya seeds are good. I hear pumpkin seeds are good.

And honestly, I hear that, too. But the most effective thing that I've found as far as a diet for parasites is actually fasting. You're literally starving the bugs out. Because you think about those people that are like, oh my gosh, I'm so hungry. I have like these blood sugar cravings. Is it really you that's craving that, or is the critters inside of you? And when you start to think about it in those terms, it's like, whoa, wait a minute. Who's actually running the show here?

So if you intermittent fast or block fast and really say like, hey, I'm not going to feed you critters. You're going to have to deal with this on your own. I feel like that's one of those great tools in your toolbox. And then throw on top of that, now you add in maybe anti-parasitic herbs and things like that. You can really start moving the needle forward, or really start moving that barometer forward on clearing these parasites out and really changing that ecology of the gut.

Dr. Jockers: Yea, it makes a lot of sense. And so, Dr. Jay, what are some of the fasting strategies you like to use with your clients?

Dr. Jay: Well, with our clients, with myself and my docs, I would say that we see a subset of the population, like very sensitive, chronic illness. So just to bust out and do a water fast straight up is not usually one of those first recommendations I'll make. You know, there are some people that are literally bedridden. So it's like baby steps are always a great thing to think about.

So daily intermittent fasting I feel like is a great thing to shoot for, or even just periodic daily intermittent fasting. So that would be where you eat within a six to eight hour window. Well, for somebody that's never really done that before, even an eight hour window might be a little stretching it too much.

So then we just start trimming that breakfast back a little bit, where if you eat breakfast to kind of push that back. And then try to tighten up and make sure to finish your meal two hours before you go to bed. That will let you have some time to process that before you go to bed. So you kind of just keep tightening that window up.

But I feel like one of the best things for the body is just to change it up, to really force your body to adapt to what you're doing to it. So if the body is constantly in this adapting role, then the body is really in this health role. I feel like when people start fasting, they're like oh my gosh, I'm doing so amazing! Or they jump on a paleo diet or a keto diet or a

vegan diet, and all of a sudden they're like, oh I feel so great.

Well is it the actual diet, the type of food you're consuming? And I really believe the quality of food is important. Or is more of the fact that you're just changing up what you've been used to?

And I feel like that's the key when we're looking at fasting, is to have days where maybe we go work out and we're very strenuous. And then we go eat a lot of protein, lots of fats, and maybe even lots of carbs. And the next day we do just a whole block fast, where we just drink water. We make sure we add some good electrolytes and stay hydrated.

And I love kind of that changing it up, because I feel like that's when our body is going to listen to us more, instead of just being stuck on something. So I'm a big fan of like variety and kind of forcing our body to break out of just well, here's what I eat. Here's the time I eat, here's when I eat. You know, it's like change up what you're eating and change up the timing of when you eat to keep your body on edge to keep growing in health.

Dr. Jockers: Yea, it's kind of an ancestral approach, that feast and famine cycling, something all of our ancestors did on a regular basis. Now, you talked about how you're working with a sensitive group, which makes a lot of sense since you're a chronic infections expert. So what kind of precautions do you give when you're working with people, or just people in the lay public that are listening, as they begin to fast?

Dr. Jay: Yea, so monitoring blood sugar and adrenals. So most of my clients, adrenal fatigue or just like adrenal exhaustion, just technically what would be called adrenal insufficiency, maybe on a more scientific basis. So the more stressed your adrenals are, the tougher I feel like it is to handle fasting off the bat.

So I'm looking for little wins. I always like to open up the drainage pathways, making sure that you're pooping, the colon is moving. The liver bile duct is so key, especially in the keto world, especially in the fasting world, and just digestion in general, supporting the lymphatic system.

So I feel like you only win when you support drainage to kind of prep yourself. Because anytime you start to kill bugs off, whether you're taking a natural herbal killer, a pharmaceutical maybe antibiotic type killer, or you're doing something like fasting that's going to kill of bugs, starve them down, well they have debris. They create debris, they create inflammation, and we want to clear that out. So if the drainage pathways are clogged, you're going to have more symptoms. So supporting drainage is absolutely a massive key.

I love to look at the daily intermittent fasting and kind of shortening that

time window when they eat. The people that struggle, little spoonfuls of coconut oil I found to actually be a really great one to kind of balance that. I don't know if it's the blood sugar or just give them like some ketone energy or what it is, but people are always like, "I'm just going to eat coconut oil off a spoon?" I'm like, yes. Even if it's just half a teaspoon, start with something light.

Dr. Jockers: A fat fast, where you're getting fat, right, which is going to help stabilize blood sugar and help produce some ketones, yep.

Dr. Jay: Yea, it's probably the medium chain triglycerides, the ketones, all that. But I found that to be a really good helper to start with. And then I always like to tell my clients, like okay, let's say you have Lyme disease, Epstein-Barr virus, cytomegalovirus, all these chronic infections. That's last. Even though that gets all the attention, that and detoxing, heavy metals and glyphosate, those two things are last. So everything else has to come before that to get you ready to get there.

Drainage is part of it. Parasites are part of it. Make sure your environment is clean of EMFs and EMR. Make sure mold is not part of your environment. All those things, making sure you don't have amalgams in your teeth, you don't have cavitations or infections in the jaw, like all those things have to fall in line in order for you to get to the point where you can detox heavy metals out of you, or you can clear out those smaller infections.

And intermittent fasting, daily intermittent fasting, block fasting, and changing it up, it's just a great tool to really down regulate inflammation. It's a great tool to increase your immune system, because so many clients I see have a weakened immune system, like just nothing is even responding. So you can run a lab test and maybe find, oh, their immune system is reacting to maybe a type of co-infection in their body.

And then you start working with them and you start activating the immune system, you rerun a test, and now there are five things instead of one. And that person starts freaking out, like I'm doing worse. It's like, no, no, no. Your immune system wasn't even like kicking on before. Now it's kicking on. Now it's actually recognizing what's going on with the body and clearing it up. And fasting is one of those ways to really trigger that immune system.

I interviewed Dr. Bob Miller. He's kind of like a genetic genomic guy. And he was explaining mTOR and autophagy. And I've heard this many times. But it was actually like it clicked. I'm like, oh my gosh, fasting really triggers autophagy, which just means clean up cell debris. And we're stuck in a society where we're overfed, but undernourished with nutrients. And we're always like in this mTOR mode of building, building, building.

And now we see like this cancer epidemic. And fasting, I feel like, is that thing that can just clear up debris, that can clear up the lymphatic system, that can help drainage, that can really clear up the mind and the thought patterns. I would love your thoughts on where you feel like fasting, mTOR, and autophagy really fit in, too.

Dr. Jockers: Yea, absolutely. I think talking about chronic infections, that sort of autophagy, or it's also called autophagy, depending on who you talk to, that autophagy process actually is a great way to clear out viruses. You know, viruses are intracellular parasites. And so a great way for your body to get rid of these damaged, decaying cells that are infected with viruses is through periodic fasting and extended fasts from time to time. And it's really, really powerful as far as that perspective.

And then you talked about cycling between mTOR in order to build lean body tissue. You want to activate that pathway with good nutrition, good protein, amino acids, and then also getting that cellular cleanup with the autophagy. It's really, really powerful stuff. I'm glad that you brought that up. It plays a big role when it comes to chronic infections.

And so what sort of supplements do you see being really, really helpful for removing and reducing chronic infections? And I get this question all the time. What supplements are safe for people to take when they're fasting? So you could, touch on that as well.

Dr. Jay: That's really the question. How do you define fasting? Some people say that true fasting, and you would know more of this, but people say that true fasting is literally maybe just water and some sea salt. Like there's no supplementation. You're really trying to minimize anything you're putting into the digestive tract, because the less you put in the GI, then the more the GI can heal. So I like that concept.

In the parasite realm, though, I find, yea, can you just fast and clear things out? Absolutely. But clinically I found that you can clear more critters quicker if you throw some anti-parasitic things in and other products. So I'm a really big fan of mimosa pudica seed. Our good friend, Dr. Todd Watts, was showing me pictures of things people were getting out, and I'm like oh my gosh, I want to try this. What is this? And it took me literally probably two weeks to remember, okay, mimosa pudica seed. It's just such a funny word.

And so I started taking it. And that's when like seventeen days in I got these two worms. They were dead. They were roundworms, *Ascaris lumbricoides*. But they were hanging out of me. I went number two and I went to wipe. And I'm like that doesn't feel right. I looked down and they were hanging out of me into the water of the toilet. They were that long. And I was like, oh my gosh! I had to take some toilet paper, grab on, and just slowly pull them out.

And then the next month and a half, I just had piles of like these four to seven inch worms coming out of me. And I'm thinking like, oh, I'm done, right? And then nope, another round. I had to go and then pinworm issues and all kinds of stuff. It's like once I unlocked the big critters, then the smaller ones started releasing.

So if there is any advice I can give the listener right now, it's when you're parasite cleansing, be persistent and consistent. When you think you're done, go just a little bit longer, because worms come in waves. They love the full moon time. They love even new moon as well, too, but full moon more so, with the water changing and things. So mimosa pudica seed I found to be a great tool to do while fasting.

The easiest way to think of it is it's fat soluble and it's sticky. So you put it in and it basically turns into a sticky gel, and it's grabbing onto stuff. It's grabbing onto biofilm. It's grabbing onto Candida. It's grabbing onto parasites. And it has like this clinging effect. And it's anti-parasitic, too, so it can kill them.

But it's got this clinging effect that it can just peel them off and really start clearing things out. We've seen chunks of like beef jerky come out of people. Who knows what it was that basically like petrified within the digestive tract? But trying to think, oh I'm going to get a good gut without getting something like that out of there?

So what I've found, though, probably one of my most breaking clinical breakthroughs recently, which I want to share with your listeners, is the mimosa pudica challenge. So I love doing fasting along with coffee enema, along with mimosa pudica challenge all together, because I feel like it's a great thing.

So when you fast, the GI, at least I've found, just slows down, because you're not putting food in and you're not going to be pooping as much. So I love coffee enemas to keep the bowels moving as you're doing something that's anti-parasitic. And you can throw other things in there like clove and neem and triphala and vidanga and holarrhena, all these different Ayurvedic herbs, which seem to work really well against parasites.

But mimosa pudica, what I like to do is take one capsule. And if you're new to this, you don't start here. You just start with the typical dosing, two caps twice a day. If you're really sensitive, you can start with one cap once a day and work up to one cap twice a day, two caps twice a day.

What I found is after somebody has taken mimosa pudica and they're like, oh, I'm not seeing anything, I'm not feeling anything. Great, then increase it. So if the typical dosing is two caps twice a day, do that a month. If you don't notice anything, then for the next week take three caps twice a day. If you don't notice anything after a week, increase it to

four caps twice a day. If you don't notice anything, increase it to five caps twice a day.

I've seen my mother-in-law, my wife's mom, she's like I'm not feeling anything. She got to five caps twice a day, and it was like the floodgates opened. Stuff came out of her. She's like I don't know where these things came from or what they are. And they were like all these strange-looking creatures.

But it's like you kind of have to hit that point where like you're chipping away

at the wall and then all of a sudden it busts through and it starts coming out. So that's one method that you can really utilize, *mimosa pudica* seed.

The other one, though, is the challenge where you're taking one cap every half hour, and you're doing it while you fast. So let's say you wake up at 6 a.m. Take a cap and a bunch of water. Always be hydrated. You're such a great educator on hydration. And I love your thoughts on liquid food earlier and more solid food later. So for those listeners, you've got to listen to more of Dr. Jockers' stuff on that.

But take a *mimosa pudica* capsule, one cap every half hour. And do that literally from 6 a.m. until food time. So let's say you're daily intermittent fasting. You're going to eat lunch at 2 p.m. Great, well now you literally set an alarm on your phone, because it's too easy. And if it's too often, like every half hour, then take two caps every hour, right? Like you can pick it. You can try it out. You can start with one cap once an hour.

We have some people that do it more intense where they're taking two caps every half hour. And they're just going to do it for a few hours. But the idea is if you take small amounts of *mimosa pudica* that really kind of gets thickened in jelly, rather than just a big chunk all at once, that consistency while your fasting seems to get more critters out than if you just take ten caps at once and be done with it.

Dr. Jockers: Wow, that's powerful! That's really, really good strategies. I know I've started experimenting with the *mimosa pudica*. We carry a product that you are part of called Para 1 that has that. And we just started using that. My wife is actually using it. So I'm going to recommend that little half hour challenge and see what she experiences.

Dr. Jay: And I love when you're looking at coffee enemas, you can do *mimosa pudica* before. You can also do *mimosa pudica* after. You know, you think of like the typical charcoals and clays and stuff that you've taken before and after a coffee enema for a catcher's mitt. Well the same thing, if you feel like you react to coffee enemas, it's probably more the critters that are reacting, which means that it might be more

beneficial for you to throw like anti-parasitic type herbs down the hatch, than to take like a charcoal or a clay.

Now there are new things out like the bioactive carbons that you can take. You can take clove, neem, Vidanga, all this stuff with the bioactive carbons and it's not actually going to bind it, where you're getting the binding plus some anti-parasitic. So it's a more advanced strategy.

But the coffee enemas are a great tool to really stir those things up. And mimosa pudica is a great tool to really grab onto them. It does have anti-parasitic type properties to kill them. And then just the whole thing of fasting, which your whole summit is about, it's so powerful to help activate the immune system, help the gut. And those things, I feel like, are just win-wins.

Dr. Jockers: Yea, absolutely. And so Dr. Jay, this has been a really fascinating interview. Where can people find out more about you?

Dr. Jay: The easiest place is my main website. It's drjaydavidson.com.

Dr. Jockers: Awesome! Well great. It's been an honor to have you on, Dr. Jay. You have been an inspiration to me. And, you know, a lot of the products like the mimosa pudica that you and Dr. Todd Watts have helped formulate, I'm now using and teaching my team how to use.

And so I just thank you for all the contributions you have made to the functional medicine world and really helping people reduce chronic infections. We definitely have an epidemic when it comes to that. And I love how you can incorporate in fasting strategies, and just kind of the feast and famine cycle. So I appreciate this interview and taking the time to do this.

Dr. Jay: Thank you, Dr. Jockers. Last tip, if you do coffee enemas, put some bio-molecular oxygen in the coffee enema solution. Make sure it's cooled down and you're ready to put it in. Use the coffee enema, but try ten drops. I've worked up to twenty-five drops. It's basically like rectal ozone, but more stable. So it's another way you can kind of facilitate critters to come out. But start slow, maybe with just a couple of drops. Then you can slowly work up. I've don't this for a long time. So the twenty-five drops is a little extreme, but just another tip there.

Dr. Jockers: Fascinating. Really, really good stuff. Full of tips there, Dr. Jay. So I appreciate that. And for all the listeners, I want to leave you with this last thought. Fasting can truly unlock the dormant healing potential within you. It's safe, it's powerful, and it just might change your life. And so give it a shot. We'll see you on a future interview. Be blessed, everybody! Bye, bye.

Fasting Strategies for Autoimmunity

Guest: Dr. Tiffany Caplan

Dr. Jockers: Well, hello, everybody and welcome to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. Super excited about today's interview. You've probably listened to several interviews I've done. I'm your host, Dr. David Jockers. And fasting really can play a key role in helping our immune system and we're going to dive into that in detail. There's so many people out there that are suffering with chronic inflammatory conditions, as well as autoimmune conditions. And fasting can be a great tool in our tool belt.

And so the expert we have on is Dr. Tiffany Caplan. She's a certified functional medicine practitioner who has experienced firsthand how lifestyle medicine can save a person's life, and she's blessed to be able to educate and help people suffering with chronic illnesses. Dr. Caplan is the bestselling author of *The Lupus Solution* and founder of Caplan Health Institute, which is a virtual practice with educational resources, courses, and one on one coaching and consulting for people with chronic illness who have the goal of achieving long term remission. And you can check out her website, centerforintegrativehealth.com. So, Dr. Tiffany, thanks for joining us here on the Fasting Transformation Summit.

Dr. Tiffany: Thank you for having me. This is a really important topic and I'm glad to speak on it.

Dr. Jockers: Yeah, absolutely. And so I'd love to hear your story. I know

you had a family member that had suffered with debilitating issues and I'd love to hear more about that and what you learned through that.

Dr. Tiffany: Yeah, I got introduced into functional medicine for my own personal health reasons. I was having severe depression, anxiety, the medical model was just kind of just throwing pills at me and wasn't helping me. Nobody was talking about diet or lifestyle, or these factors. So I found a functional medicine doctor and literally, it changed my whole perspective on health and it changed my life. And she got me just into this whole new realm of helping people in a different way. And so when I had a family member diagnosed with lupus; that was also a big changing point because I realized that again, people were being failed in the medical model. Not getting the help or the support, or the guidance that they need.

Because it's an autoimmune disease, which they're told there's going to be lifelong. They're going to be on these medications for the rest of their life. There's nothing they can do for it. But we found and we work with patients all the time to get into remission with autoimmunity; so it's possible. And so I wanted to get the information out there, that's why we wrote the book, *The Lupus Solution*, my husband and I, and hosted the Lupus and Autoimmunity Summit. We want to just get the information and the hope out to people that remission with autoimmunity is not only possible, but people can start doing that just today.

Dr. Jockers: Yeah, absolutely. And lupus is obviously a very, very serious disorder and it's a growing disorder; all autoimmune conditions are growing. And so let's talk about the immune system a little bit. What is the immune system? How does it work? And let's talk about how fasting can impact it.

Dr. Tiffany: So the immune system is naturally just our body's way of protecting us, right? It's a system that will find or encounter things that are foreign or potentially harmful, and help us fight them off so that we don't become sick or have injuries and problems like that. So our immune system is supposed to protect us. And when you have an autoimmune disease, what that means is that the immune system actually turns on our own tissues, on our own cells, our own body parts and mistakes them for being bad, harmful, or foreign and causes a destruction of them.

So, someone with like rheumatoid arthritis or lupus may have destruction of their joint tissue, so they get a lot of pain and inflammation, stiffness in their joints and that's how it kind of presents symptomatically but it's really like your immune system is driving that process. There's over a hundred different autoimmune diseases. So across the board, people are suffering all the time with immune system issues and not really knowing that that's what's driving it. I mean, even

things like eczema, psoriasis, Hashimoto's, like those are autoimmune and people kind of just write it off as, "It's just a skin issue," "It's just a thyroid problem," that type of thing.

But the way that fasting can help is we know that one, fasting is naturally anti-inflammatory, but it also can help reset the immune system. So, fasting basically forces your body into clean house mode, where you get rid of old damaged or weak cells. And so with the immune system, it basically forces your immune system to recycle all the old, damaged white blood cells and then return. You actually start to produce and regenerate new, healthier white blood cells and immune cells. And fasting can be effective in as little as three days, you can get a good reset of your immune system. There's even intermittent fasting, there's different types of fasting.

And even with cancer patients, we know that intermittent fasting can be helpful, in terms of helping the immune system protect against the damaging effects of chemo. Again, by regenerating the immune cells. In MS patients, they're finding fasting can be helpful in regenerating the myelin that's been destroyed. So things like that. And so in an autoimmune disease, our goal is always to just get to the root of why that immune system is doing what it's doing, because it has to be triggered to have that aberrant response, and then be able to find ways to change that through diet and lifestyle, and the things that we do on a regular basis.

Dr. Jockers: Yeah, that's a great overview. And so what are some of the main root causes that you're seeing on a regular basis? I mean, I know you're running labs and working with a lot of clients one on one. What are some of the common root causes that you're seeing?

Dr. Tiffany: So I think the first thing we always look at is the gut because the gut houses like 80% of the immune system. So we're seeing leaky gut and food sensitivities, and microbiome disturbances and things like that are really creating a lot of inflammation. We know that stress is a big driver, we find that people are just so stressed out on a daily basis. And a lot of times they don't even realize that they're stressed out, or that there's other forms of stress in their bodies. So, it's not always just like mental, emotional stress.

It might be the physical chemical stresses that they're encountering. Whether it's like hormonal issues, insulin surges, again, microbiome problems, nutrient deficiencies, kind of across the board. We see, you know, even in sunny California, people are deficient in vitamin D all the time. So, just having those things missing. Yeah, I think diet and lifestyle play the biggest role in actually being able to not only help support the immune system, but to get it into a remission state.

Dr. Jockers: Yeah, for sure. What are some of the big... you mentioned vitamin D, what are some of the other nutrient deficiencies that you're seeing on a regular basis?

Dr. Tiffany: I think the things that are really needed for the gut, a lot of people are just eating the standard American diets, we're missing out on nutrients that really should be in our food because we're not eating real food or it's been processed, or it's the soil is lacking the nutrients. So just across the board, the foundational things that we should be getting from our diet are missing. Also, things like people are not eating a lot of fiber, which is good for the microbiome and creating short chain fatty acids to help heal the gut lining. I think, yeah, just not digesting well. So people aren't getting the amino acids from their proteins that they're eating and eating too many pro-inflammatory fats from their diet, things like that.

Dr. Jockers: Yeah, yeah, absolutely. And so, you talked a little bit about fasting and how it helps the immune system. What kind of fasting strategies do you like to utilize with your clients that are dealing with autoimmunity?

Dr. Tiffany: So when dealing with somebody with autoimmunity, there's like that whole spectrum of, how stable are they? And so I find somebody coming in with something just, you know, a simple eczema versus somebody that comes in with five different autoimmune diseases and multiple sclerosis, and psoriasis, all these different things. So depending on how fragile the person is and at what state they're in, there's a bunch of different fasting strategies and they all have a little bit different impact on the immune system.

Sometimes I'll start as low as doing something we call the lemonade fast, where it's not a complete water fast because we have them add in some like lemon juice and some maple syrup into the water to help keep their blood sugar stable, so that they can go three days without crashing or having issues. So sometimes we'll start with that. Sometimes it's the fasting mimicking diet, like the one from ProLon. Or some people can do fasting, they can do a water fast for three days.

Dr. Jockers: Yeah, and so those partial fasting strategies, like you talked about there, fasting mimicking diet or lemon juice diet. Do you guys use a bone broth fast or something like that?

Dr. Tiffany: Yeah, you can do bone broth too and that's super healing for the gut and soothing.

Dr. Jockers: Yeah, and all those strategies are reduced calorie load, which over time, doing that for several days, that's going to induce that autophagy, like you're talking about, where the body starts to break down those older, less effective immune cells and those immune cells

that are causing more havoc; they're causing more harm than good. And so it usually takes a few days when you're doing that. But how about intermittent fasting? How do you practice that or how do you teach that with your patients?

Dr. Tiffany: So if somebody is ready for it, then we start slowly, maybe like, "Try a day and see how you feel with it." And then try to incorporate it maybe a couple times a day. So, trying to get to the six to eight hour window of eating. And I've actually seen some people too, they switched it and they do better eating in the morning and then stopping in the afternoon and kind of going overnight. So wherever that window is, and we'll do that. And then maybe they'll do maybe a day here or there with a total water fast.

Dr. Jockers: So are you trying to figure it out via trial and error or is there anything that you're seeing on a lab or maybe patient history that would let you know what kind of fasting strategy would work better for somebody?

Dr. Tiffany: A lot of it just comes from talking to the patient with the health history and figuring out, how do they feel when they do something like that or looking for signs of reactive hypoglycemia per se, on like the blood work. Things that kind of show maybe they're having issues with regulating their cortisol. Maybe one of their biggest issues is insomnia and they're waking up every few hours because their blood sugar is crashing or something like that. So, a lot of times just talking to the patient, like, "How do you feel with that or have tried it?" So it's a lot of trial and error.

Dr. Jockers: Yeah, exactly. I found that patients that exhibit more issues with insulin resistance tend to do better with fasting off the bat. And those with more of that reactive hypoglycemia, like you were talking about, they need to really take it easy. And sometimes I'll start them with like, you know, just simple fasting, 12 hours overnight. And then crescendo fasting where they're just doing a 16 hour fast, twice a week, non-consecutive days; kind of like exercise, they only exercise twice a week. And there's a little bit of stress, but they have time to recover. I've seen that work. So, how are you introducing fasting? Like, let's talk about your initial consults. And how do you bring that up to them?

Dr. Tiffany: I was just going to talk about the health benefits of it. So all the positive things that it can do for the immune system. Like, again, one of the most common things we find is people are reacting to the food they're eating. So, simply by giving your gut a break, we're helping the immune system kind of reset or the gut reset. And if they have a lot of... like, we do stool testing, and if they have a lot of issues going on in the gut with the microbiome or leaky gut, and we need to give the gut a break, because we know the gut cells repair themselves every three

to five days or kind of replace themselves. So that's just having them understand, "Okay, this is why we're doing it. We're not trying to just starve you. There's reasons for it." And then try out the different or talk about the different types of strategies that we can do with the fasting.

Dr. Jockers: Yeah, absolutely. That makes sense. And let's say somebody has had experience with fasting in the past, like, say they had mixed results, what would be some things that you might do? Like, let's say they had a bad experience with it, what are some things that you found that can help them out that might help them have a better experience in the future?

Dr. Tiffany: Yeah, if they had tried just like water fasting, then maybe we would try something else, more like the lemonade thing that we do or the fasting mimicking, or do a shorter period of time and do more of the intermittent fasting. You can also do just more caloric restriction. They've shown too that if you cut your calories in half, like by 50%; that also has positive impacts on the T cells and everything. So that could be another strategy.

Dr. Jockers: Which is kind of like the fasting mimicking. That's kind of like the fast mimicking diet. Do you want to explain more about that since you've been using that in the clinic?

Dr. Tiffany: Yeah, it's just keeping very low calories. So it kind of, again, forces the body into using up the glycogen stores, which is what is affected with fasting and kind of gets the autophagy going. So it's not a complete fast. So, for people that are kind of against doing a water fast or something, it's an easier way because they're still drinking and eating these little things throughout the day. And I think fasting, for most people is more of a mental challenge than anything. So I think that's what's helpful with the fasting mimicking diet, is it's not as challenging mentally.

Dr. Jockers: Yeah, and it's like a low protein, plant based, ketogenic diet. That's low calorie as well. It's mostly like nuts and olives, and stuff like that; seeds. And yeah, I think like the first day you're consuming about 1,200 calories. So, an average person is going to need typically 2,000, 2,500 calories or so. So you're cutting it down to roughly 50%. And then I think the other days, the other four days are around 800 calories. So you're getting into that.

The research shows that like, when you cut it down to about 40% of your calories for three to five days, you're going to start ramping up autophagy and stem cells. So that's what I've seen. And then, like you were talking about with those liquid diets, like the master cleanse, lemonade diet, that's probably like, I don't know, 400 calories or so. So it's even more calorie restricted. You're just kind of sipping it, keeping

your blood sugar stable, basically. That's your goal, at least the whole time in staying hydrated with it.

Dr. Tiffany: Right and then people also kind of feel... they don't feel like they're fasting as much because they're getting that little energy and they're sipping—

Dr. Jockers: The sweet flavor. Yeah, exactly. Which helps because that helps... even if it's like stevia, even if it's not calories, it'll still boost your serotonin and your dopamine, which helps you feel better because that's a big issue. A lot of people, when they fast, their neurotransmitters go down because they're so used to hitting those neurotransmitters every time we eat, and then they feel depressed, a little bit emotionally down. And so having something sweet like that can really help boost that. So if it's an emotional issue that can be a great fasting strategy.

Dr. Tiffany: Yes, exactly.

Dr. Jockers: So let's talk a little bit more about autoimmunity. And what kind of labs are you typically running when it comes to autoimmunity? And what are some other strategies that you'd like to utilize to help people get to the root cause and correct it?

Dr. Tiffany: So, some of the more across the board labs that we use, we use a lot of blood testing to kind of just check some of the foundational things. Like for nutrient deficiencies, for insulin problems, for thyroid issues, anemia, that type of thing, or just also inflammatory markers. A lot of patients already have... when they're coming to us, they already have a team of doctors running all the big specialty tests and antibodies and all that stuff. So we watch those things too but we're just more interested in the function of the body when it's not optimal.

So we look for things that maybe aren't normally checked on bloodwork. We'll do stool testings, and we look at the microbiome in different ways. See how well the person is digesting, if they're making enough enzymes. If they're absorbing. If there's signs that their secretory IgA, their immune markers in their gut, are too high or too low. They're having maybe low short chain fatty acids, so they can't repair. Also things like beta-glucuronidase in the stool, we check for to see if that's causing maybe hormonal imbalances with estrogen dominance and things like that. We will do sometimes more saliva testing too for adrenal function and cortisol.

Cortisol is huge. I find that most people with autoimmune disease have problems with their adrenals to some degree. Whether it's just acutely or more of a chronic adrenal fatigue type situation going on. And so one of the biggest things that we work on with people is in the lifestyle realm, is working on stress management. Identifying where their

stressors are coming from, helping them kind of get some good habits in their day, whether it's exercise or meditation or breathing, or journaling, to help them be able to handle and get through stress easier.

So it doesn't have that like longer lasting, negative impact, because just like inflammation, like acute inflammation is helpful, chronic inflammation is harmful; acute stress is helpful, chronic stress is not. So we see that that's a big perpetuator of the autoimmune process. So we just kind of look at all those different aspects and all those different things in what the person is doing and they're exposed to on a daily basis and kind of help fill in the gaps through diet changes, lifestyle changes, and supplements with different nutrients.

Dr. Jockers: Are you seeing people that you're working with tend to have higher cortisol or lower cortisol? Let's say in the mornings, morning, you're supposed to have high cortisol. What are you often seeing there? In the evening, of course, you should have low cortisol. What kind of patterns? Are you seeing anything that jumps out more often than, than others?

Dr. Tiffany: More often than not, people are having low cortisol in the morning. It's that opposite pattern, where they're not getting the cortisol awakening response, because one of the biggest complaints across the board with all autoimmune diseases tends to be low energy. And so people are just waking up with lower cortisol than they should and then they don't have nearly as much going throughout the day. Or sometimes they'll also get that reverse curve where they have too much cortisol at night, and then they're having problems sleeping, falling asleep is difficult. So we also test the cortisol awakening response, we'll do that. Have them do like a sample when they first wake up and another sample 30 minutes and kind of see how it increases, if it does or not. So that's more common than not, as people are not having...

Dr. Jockers: Yeah because you should get a big rise and that gives you that wakefulness in the morning.

Dr. Tiffany: Yeah. And most people aren't getting that.

Dr. Jockers: Right. Yeah. So they're not getting that. So let's talk a little bit more about what cortisol does for the body, how important that is, because that does play a big role with fasting because when we fast, typically our cortisol goes up.

Dr. Tiffany: Yeah, so again, not all stress is a bad thing. So when we're talking about, "Oh, fasting makes your cortisol go up," that's not necessarily a bad thing. People freak out with high cortisol. But cortisol is just basically the hormone that helps our body deal with stress, chemical, physical, mental, emotional. It helps... like, let's say your blood

sugar is dropping, it tells the liver to shunt out some extra sugar so you don't go hypoglycemic. It helps keep us asleep at night or helps us maintain our energy throughout the day. It helps stimulate different healing mechanisms in the body. So cortisol is not a bad thing. But like you said, it is impacted with fasting in a positive way. So we get like a positive surge of cortisol when we do that.

Dr. Jockers: Yeah, and oftentimes a lot of people feel almost like they get a natural high when they're fasting, and they're more productive and energetic, and things like that. Part of that is because of the cortisol. However, for somebody that has some sort of a cortisol dysrhythm, just an abnormal rhythm, sometimes it can trigger more insomnia, trouble sleeping at night, things like that. So that can be an issue too. What kinds of things are you noticing? Like, let's talk about like some herbs that can help or just nutrients and minerals that can help with keeping cortisol more balanced in the body.

Dr. Tiffany: There's a lot of adaptogenic herbs that help kind of regulate. So one of the most common people know about is like ashwagandha, a lot of people use that. I've been actually using a combination of the different adaptogens, it works better than just using one single thing. But we also know, even like B vitamins are important too for adrenal function. So it really depends too on the person, if they tend to have no cortisol or if they tend to have too much cortisol, yeah, if it's like spiking or falling. So adaptogens kind of help keep that more consistent, but there's also some more things like licorice that can be more stimulating for cortisol. So we use a different variety for whatever is going on with that person.

Dr. Jockers: Yeah, I know magnesium is a big one too. Magnesium is a good kind of modulator or balancer with cortisol. I found rhodiola and eleuthero tend to be a little bit more stimulating. They're obviously adaptogenic. So adaptogens kind of, it's almost like a temperature regulator, right? So if you've got it set for 67 and it's 69, it's going to bring it down to 67. But if it was lower than 67, it would bring it up. But there are some that I found that tend to be a little bit more stimulating, like ashwagandha tends to be a little bit more relaxing and calming. So, have you found any other ones that you've noticed? Let's say like, I don't know, ones that help people get better quality sleep, especially when they're fasting. I think that's a big complaint that I hear from people, is they enjoy how they feel when they're fasting and the results but they don't sleep as well.

Dr. Tiffany: Well, I think the magnesium, like you said, it'd be a really good one for sleep. I'm trying to remember, there's a blend that we use topically, it's called AdrenaCalm, and it has a bunch of different herbs that help. And I think there's things even like passionflower and lemon balm and things like that that are really calming and soothing. So you

can use that before bed and it helps take it down a notch and helps people stay asleep throughout the night.

Dr. Jockers: Yeah, I found those ones, passionflower and lemon balm... valerian is another good one. Skullcap is another good one for like calming and relaxing. And ginseng tends to be a little bit more stimulating, I found. There was one other one that I was thinking of, it's slipping my mind, it'll come back.

Dr. Tiffany: I know there's a few different forms of ginseng too, they can all be a little different. I can't remember off the top of my head which one we use more often. But it's usually the blends that we're using too, so they're synergistically like made to work on a certain way or a certain way.

Dr. Jockers: Oh, the one I was thinking of is theanine, L-theanine. That's also very good, very calming, relaxing, you know, it's helpful. How about GABA, have you ever used GABA to help people?

Dr. Tiffany: We have not used GABA. One of the concerns with GABA is that literally taking GABA, it's such a big molecule that if people are noticing effects that they were concerned with blood brain barrier dysfunction, and so we'll use like the precursors to GABA but not necessarily GABA itself.

Dr. Jockers: So precursors like theanine actually helps GABA agonists. In fact, most of those herbs I just talked about are all GABA agonists too, meaning that they help promote it. And then you've got different amino acids that are part of that as well.

Dr. Tiffany: So even things where you could use like, 5-HTP to kind of be the precursor for serotonin to make melatonin.

Dr. Jockers: Yeah, that's important there too. Well, great. And obviously, you've helped a lot of people with autoimmune disease. So a lot of people think that if you have an autoimmune disease, you're basically living with that for the rest of your life. And you may get some hope with suppressing some of the symptoms but more or less that it's kind of your lot in life. And so what have you found with that working with people?

Dr. Tiffany: And that's not the case for most people, a lot of people say, "Well, it's just genetics or something." But really what we find is it is a lifestyle disease, just like a lot of things that people are suffering with, like diabetes or cardiovascular disease. Not only is autoimmunity preventable, but it's also reversible. Like, you can get it into a remission state. And remission doesn't mean it's cured because once your immune system recognizes parts of your own body as being bad or foreign, it

creates these memory cells; it's going to remember that. So you can always have the chances of it flaring up later.

And our goal is to stay in what we call a remission state, where it's non active, it's not creating complications or destruction. And then it's also not symptomatic in that state too. So figuring out for the person what the root causes are that are driving that immune response in the first place, helping them learn the dietary lifestyle factors. That they need to continue moving forward to not only support their immune system, but just to support more optimal health in their body, makes it so that they're not only fixing the problem and getting rid of their symptoms, but then it's more of a lifelong, healthier way to maintain that too.

So they're avoiding the flare ups and they're avoiding the complications, and they're avoiding too developing another autoimmune disease, because when you have one autoimmune disease, the chance of developing another one is much higher. And so, just kind of getting into the state of more optimal health as a whole is really important. I think educating patients is a big part of what we do. Just kind of helping them figure out an owner's manual for their body of, what does it need to function and why does it do things that it's not supposed to? So they can have those tools and that knowledge to keep going.

Dr. Jockers: Yeah, I think that's great. And I always tell clients, it's kind of like, in a sense, almost like getting a master's degree in your own health. So it's going to be a process that takes time. You wouldn't take the final exam of a class, the first day you went in, there's a learning process, a learning curve. And your body's got to adapt and learn too and that can take time as well. So it's really important to be patient with the process. And look at it as an investment, you know, an investment of your time, your money, and energy and getting healthy. That's something you can carry with you for the rest of your life. Kind of like if you got some sort of a degree or certification that you use for your career, you know, this is really your health, which allows you to do everything that you want to do for the rest of your life and your future. So yeah.

Dr. Tiffany: And everybody is different too. So, you know, taking time to learn your body and not losing hope if the first thing you try doesn't fix everything. That's important too.

Dr. Jockers: Yeah, absolutely. Not losing hope, that's very important. And trying different strategies because there are a lot of different things that can work and everybody's different, unique, and so you've got to kind of find your own custom template for it. And I know, Dr. Tiffany, that's what you do for people. You do consults, work with people one on one. And so tell us more about how people can get a hold of you and find out more information about you.

Dr. Tiffany: Yeah, we work with clients around the world, like you don't have to be in where I have a brick and mortar practice in California. But you can find out more on our site, caplanhealthinstitute.com. That also is the place where you can find some more resources and more about what we do. And you can sign up too for, like we do a free 15 minute discovery call where we kind of just talk to you about what we do and see what you have going on, and see if it's a good fit for working with us. So that's something we offer and you can find out more just at caplanhealthinstitute.com.

Dr. Jockers: Well, fantastic. Well guys, definitely reach out to Dr. Tiffany, especially if you're out there and you've been suffering with some sort of chronic issue. You've tried different lifestyle strategies and you're just not getting the results that you want, then it's really important that you work with some sort of professional, somebody who can coach and guide you. It's just so important. Don't think you can do all of this on your own or you have to do all of it on your own. Obviously, you're going to learn a lot in this Fasting Summit, strategies that you can apply that may get you phenomenal results. And I've seen that time and again.

But if you've been suffering for a long time, it's really important to work with a coach. And so, Dr. Tiffany is one of the best out there. So definitely check her out. And for all the listeners, I want to leave you with this one last thought; fasting has the ability to unlock the dormant healing potential within you. It's powerful, it's safe, and it just might transform your life. So try it out. And I know you're going to get a ton of value out of the other interviews in this summit. And I would love to hear your questions, your comments, so check those out as well. Thanks again, Dr. Tiffany, and we'll see everybody on a future interview.

Fasting and Its Impacts on Brain Health

Guest: David Perlmutter

Dr. Jockers: Well, welcome, everybody, to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. And I'm your host, Dr. David Jockers.

And I'm really excited about today, because we're going to dive into fasting and implications it has on brain health. You know we have an epidemic of degenerative conditions like Alzheimer's, Parkinson's, and dementia. And fasting can be one of the best tools that we can have in our tool belt to help our body to actually rid itself of the inflammatory stress in the brain. It can actually boost up ketones and help support overall brain health.

And so to touch on this topic and really dive deep, I brought in one of the world's top neurologists, Dr. David Perlmutter. He's a board certified neurologist and four-time *New York Times* bestselling author. He serves on the board of directors and a fellow of the American College of Nutrition.

His books have been published in twenty-eight languages and include *Grain Brain--The Surprising Truth about Wheat, Carbs, and Sugar*, with over one million copies in print. Other *New York Times* best sellers include *Brain Maker*, *The Grain Brain Cookbook*, and *The Grain Brain Whole Life Plan*. So Dr. Dr. Perlmutter, welcome to the Fasting Transformation Summit. I'm excited to have you.

Dr. Perlmutter: Well, I'm delighted to be here. Thank you, David.

Dr. Jockers: Absolutely. And so I know you were on our Keto Edge Summit. And we talked a lot about ketones and brain health. And obviously that was a powerful interview. People got so much out of that. And so we're talking about fasting. Just kind of to start, what has been your experience with fasting and how can fasting impact brain health?

Dr. Perlmutter: I think that there are both the personal considerations, in other words what have my experiences been with myself, and also what happens in the clinic, what have we observed in dealing with patients. And I think that we need to just take a step back and recognize what happens when we stress our bodies by fasting.

I mean here the body has really over many years worked itself into a groove, into a position where it expects three square meals a day and a constant source ultimately, or typically in Western cultures, of carbohydrates to power the body. And then suddenly that is withdrawn, what is the effect? Well it represents a stress. Anything that represents a change typically is a stress.

And in the case of fasting, as in the case of many other types of body stresses, it turns out to be a good thing. We call this positive reaction to stress by the term hormesis. And hormesis actually has widespread positive effects on the human body, not the least of which are how this particular stress activates certain gene pathways which are good, which help reduce inflammation, for example, that help the body begin to mobilize other pathways for the generation of calories to keep the body fueled.

So I like fasting. I think it's a good way to jump start people. Getting back to your comments earlier about our Ketones Summit, this is a good way to really get people into that state of ketosis rather more quickly and really facilitates the body really being exposed to ketones, which is actually very good for the body and certainly extremely powerful as it relates to the brain, brain health, and brain functionality.

Dr. Jockers: Yea, absolutely. And so let's talk about this epidemic of neurodegenerative conditions. What do you think is the root cause? Like what's similar about all these different types of neurodegenerative type conditions, Parkinson's, dementia, Alzheimer's? What are kind of similar hallmarks?

Dr. Perlmutter: That's an excellent question, because mechanistically they're united in that they're all inflammatory conditions. And, you know, it certainly goes well beyond the neurodegenerative conditions that you mentioned. And it includes things like autism, coronary artery disease, diabetes, and even cancer.

So at the root of these issues is the process of inflammation. And we

recognize that inflammation is accentuated or the road is paved for increased inflammation on a diet that limits the availability of ketones and that favors carbohydrates as a fuel source. Inflammation is higher in lockstep with blood sugar measurements and with measurements of what is called insulin resistance.

The key to reducing blood sugar and to restoring insulin sensitivity is absolutely powering the body with these chemicals that are brought on by fasting. And these are the chemicals we've talked about called ketones.

I think the goal of Western physicians is to dissect our various medical maladies and try to individualize them. I think it is very important for us to take a step back and look at the broad strokes as you just indicated and ask ourselves, well if these conditions are all increasing, perhaps there is something related to environment, i.e. lifestyle.

That may unite mechanistically the genesis of these conditions and why they're worsening with time, not just because our population is generally getting older, but because percentage wise these diseases are increasing. I mean we expect by the year 2030 that the number of people in America, currently at 5.3 million, will double, and currently costing us one trillion dollars a year globally.

This is a very compelling statistic, not just from the emotional cost and the economic impact, but rather just the sheer loss of brain power that we as a culture are experiencing now and are going to experience moving forward.

Dr. Jockers: Yea absolutely. And what sort of lifestyle activities can we point our finger at as far as contributing to this chronic inflammation?

Dr. Perlmutter: I think if I could fix two things, it would be number one dietary sources of calories, shifting from carbohydrates to fat. And number two, address sedentarity. What is sedentarity? Being sedentary. People have got to get up and move.

And, you know, it's difficult when you work or when you're involved like myself. You're writing a book and you really have a deadline. And you have to devote eight hours at a time to doing this. You've got to be sure that you're moving. I mean that is so fundamentally important. It seems banal. But in reality it has huge implications.

We've fully recognized correlation between level of physical activity and risk for developing dementia, an untreatable condition. Senile dementia of the Alzheimer's type offers up no treatment whatsoever as you and I have this conversation right now. And yet those two things that I just mentioned are correlated to a dramatic decreased risk for that

condition.

So I find that to be compelling. I find it to be a bit of a life mission to get the word out, that the research clearly focuses on the notion of lowering your blood sugar and becoming more physically active as being keys to dramatically reducing your risk for dementia--again, a situation that offers up no treatment.

Dr. Jockers: Yea, absolutely. And this is a little bit off topic, but it relates to brain health. When you're sitting down and you're writing for eight hours, what sort of intervals do you do? When do you get up and move? What kind of nutrition do you have on that day when you've got to really focus, diving deep into science? You've got to work done. What's your lifestyle like on those days?

Dr. Perlmutter: Well I do a lot of writing, oddly enough, standing up.

Dr. Jockers: Do you have a standup desk?

Dr. Perlmutter: You can work standing up. In my office where I write, maybe three feet behind me, right here, is an elliptical machine. And then right next to that is a sit-up board. And right next to that are handles for doing pushups. So I'm at that all day long, and work and exercise, work and exercise. And it works great for me.

As far as nutritionally, typically I will fast for fourteen, sixteen, sometimes eighteen hours, almost every day. That means a lot of the work that I do in terms of writing and in terms of my academic pursuits are done without eating. Our conversation right now is well before me breaking fast, having breakfast, with the exception of having a tablespoon this morning of MCT oil.

So not only am I mobilizing body fat to create ketones, but I've used an exogenous source, MCT oil, of a medium chain triglyceride that is readily utilized in the body to create more ketones. So I'm powering my brain with beta-hydroxybutyrate, a very important ketone. And you tell me if I'm making sense or not.

Dr. Jockers: Oh absolutely you are. I like it. Do you feel like you're more productive in the morning? Would say that that's your most productive time? Or do you feel like you're good in the afternoon as well?

Dr. Perlmutter: It's difficult to say. There are times when I have to do things in the evening, give a presentation, etc. And I find no problem with that. I have no issues with, I believe, being mentally sharp after a meal. But, you know, even the meal is still a very low carbohydrate, higher fat experience. So it's not going to take me out of ketosis. I test my ketone levels frequently and my blood sugars as well. I tested a

couple of days ago. Blood sugar was 67 and beta-hydroxybutyrate level was 0.7. So I'm in the zone.

And I would indicate to your viewers that it's worth seeing how you perform. But don't judge early on, because a lot of people who might fast for the first time and/or add in some MCT oil, etc., will have difficulty with it. That's because their physiology hasn't shifted over. Their metabolism hasn't shifted over to being able to keto adapt, to utilize this metabolic pathway, to use body fat or exogenous fat as a fuel source.

So it does take a little bit, often times a week or two to get into the zone. And then when you power your brain with super fuel, which is what ketones are, you really get to be far more productive. You get to focus on the subject at hand. And what I find is really quite exciting for me is it allows me not only to focus on the subject at hand, but to recruit other information at the same time and bring other information to bear on a topic that I'm exploring.

Dr. Jockers: Yea, I think that's just a really profound point right there, because you get a deeper level of thought about different topics. You increase BDNF, and I want to talk to you more about BDNF, brain-derived neurotrophic factor and how that impacts it. And what he's talking about there is kind of like a modified fat fast, where there's a little bit of MCT oil in the morning, and especially for lean people. Dr. Perlmutter is very, very lean. And so it seems to work great.

And really anybody that is trying to go through that keto adaptation period like you were talking about, that first week or two, adding a little bit of MCT oil, whether you're doing it to coffee, or caffeine like green tea can help stimulate ketones and stimulate better fat-burning mechanisms in your body. So you can add it to that.

Or you can just take it straight up, like he was talking about. And that's going to provide this exogenous form, or from the outside form of ketones in your system. That will give you an alternative fuel source that can satisfy your brain. And you'll feel good with that while you're fasting and still breaking down your body's own body fat and creating ketones during this fast. And so absolutely that will help you extend the fast a little bit longer as well.

Dr. Perlmutter: I think you make a very good point. I would like your viewers, in consultation with their health care providers, to realize that when you make the commitment to move forward with this, that you can ease yourself into it with something like MCT oil. That's because what you're depending on otherwise when you're fasting, for example, is mobilizing your body fat, which is primarily what we call long-chain fatty acid.

And it's far more difficult to create ketones from long-chain fatty acids for a couple of reasons. In the liver they have to be bound to carnitine to be activated. And they have to be absorbed through a specific mechanism that involves what are called chylomicrons, whatever. The point is it's much more difficult in comparison to medium chain or shorter fatty acids, which are found in MCT oil, by virtue of its name.

Dr. Jockers: Yea.

Dr. Perlmutter: The point is that is readily available to create these ketones, which you are then able to use as fuel. So you've got fuel in the tank and you're ready to go.

Dr. Jockers: That's right.

Dr. Perlmutter: It's very encouraging for you to feel okay fasting when you've got that backup plan.

Dr. Jockers: Yea, absolutely. And like Dr. Perlmutter was saying, there's this kind of adaptation period where the body and the brain and just the cells and mitochondria have to get used to seeing ketones in the bloodstream before they get good at utilizing them for fuels. So just adding some MCT in, it's highly ketogenic. Your body turns it into ketones very quickly without a whole lot of energy. And the body starts to get used to seeing ketones in the bloodstream and says hey, this is a fuel source I can use.

It starts to up-regulate certain metabolic machinery so that it can then obviously use the ketones. And so it can help somebody who's trying to get started with fasting, or maybe extend their fasting window and kind of eat in that eight to ten hour window like Dr. Perlmutter was talking about and feel good, if they're doing it in the morning or whenever they're doing it. So some MCT can be powerful there. Did you have something to ask?

Dr. Perlmutter: Yea. I would certainly opt for much longer than eight to ten hours. For most of your fairly healthy audience I would go at least twelve hours. What does that mean? It means you have your dinner and you finish at 8 o'clock and then your breakfast at 8 a.m. You're already fasting. You fasted for twelve hours. But I would say try to put it off until noon or 1 to 2 o'clock, because you'll be in ketosis. You really will be.

You know it's a very good state of metabolism for the body. I mean infants are naturally in ketosis if they're breastfeeding for at the least first six months of their lives, a time when the brain is profoundly developing. And, you know, recognize that there are sources of medium-chain triglycerides in human breast milk. So we really want to take advantage of that understanding.

Dr. Jockers: Oh yea, yea. I was talking about the eight to ten hour eating window, eating your meals between that period of time. I always say, twelve hours I call a simple fast, because it really is simple. It's like you finish dinner at 7 p.m., you wait until 7 a.m. the next morning before you start consuming anything with calories.

And then just like you were saying, start to extend that out to fourteen to sixteen hours. And then try to wait until noon before you consume your meals. And that's really, really powerful. Especially if you are healthy, doing something like an eighteen/six can be really, really profound, where you're doing two meals in a six hour eating window. It can be really, really good for you body and for your brain.

And so let's talk about fasting's impact on the brain beyond just reducing inflammation, which is profound, shutting down the neuro-inflammasome. But let's talk about BDNF and what that does in the brain.

Dr. Perlmutter: Well, so I certainly don't want to sell ketosis short and leave your viewers with just the sense that this all about fueling the brain, and, you know, as you indicated, inflammation, etc. This chemical, one of the ketones called beta hydroxybutyrate, which chemically actually isn't a ketone. That's a big surprise. But it's generally considered to be a ketone.

Yes, it's a super fuel for brain cells. It powers those mitochondria, allowing them to create these powerful energy molecules, with reduced production of free radicals, I might add. But beyond that, we recognize that beta hydroxybutyrate is a powerful, what we call signaling molecule.

What does that mean? It means that it binds to cell surfaces and stimulates certain receptors called G-protein receptors, which then have a huge effect in terms of modulating the immune system, reducing inflammation, and overall providing a much healthier environment for the cell itself. So it's beyond just the fueling aspects of the brain cell that beta hydroxybutyrate is so very important.

This notion of reducing inflammation, I think, is very, very important. And I think the other thing to consider about beta hydroxybutyrate and why fasting and/or getting into ketosis using supplements like MCT is so valuable.

It has to do with this role of beta hydroxybutyrate as a gene expression modulator; i.e., beta hydroxybutyrate is what we call a histone deacetylase inhibitor.

And that's a fancy name for the fact that it binds to certain proteins that would otherwise lock up the expression of certain genes. And

when it binds to those proteins, it opens up the DNA and allows the transcription or the activation of genes that are basically good for us. So, you know, it's really a very, very important chemical.

One of the richest sources in nature of butyrate is butter. That's where the name comes from. So butter is a good food. My goodness, I'll take myself off that list of all those years that we castigated butter. We were told that if you ate butter, something terrible would happen. We were supposed to eat margarine.

But now we understand that butter, grass-fed, organically raised cows as a source is actually a really good thing, because (a) it's a terrific source of good fats, things like CLA, but (b) it gives you preformed butyrate. So fat is your friend.

Dr. Jockers: Yea, absolutely. And grass-fed butter is also rich in your fat-soluble vitamins, retinol, all kinds of good stuff. So yea, I'm a huge fan of butter over here. So when you do break your fast, include butter in your meal.

And so let's go back to obviously we talked about ketones and the profound effect that ketones have on the brain. Ketones also help to stimulate this compound BDNF that we were talking about. Can you talk more about that?

Dr. Perlmutter: Well, sure. So it's a really good point. And, you know, one of the reasons that fasting and a ketogenic diet are really right now the huge focus for us in neurodegenerative conditions, as you mentioned earlier, is because of the powerful effects that it has on turning on this chemical called BDNF.

And that relates back to what I had just mentioned, that this beta hydroxybutyrate changes gene expression and can augment or turn on gene expression to create a chemical called brain-derived neurotrophic factor.

Basically that's growth hormone factor for the brain. That does several things. It protects brain cells. We all need that. But it also stimulates two other issues. One is called neurogenesis, the growth of new brain cells (who knew?), and also synaptogenesis, or the connection of one brain cell to the next, which is fundamental for learning. So we really want to have BDNF amplified in our bodies.

We have BDNF throughout our lives. It declines with age. But we retain the ability to grow new brain cells as long as we're alive. You know, when we're eighty or ninety years old, we can grow new brain cells. And we are. So we want to do everything we possibly can to amplify BDNF and continue growing new brain cells. One of the areas in the brain that this

happens aggressively is called the hippocampus, which is the brain's memory center.

So the lifestyle choices that increase BDNF include really two things on the top of the list. And they are getting into ketosis and aerobic exercise. Aerobic exercise is powerfully important these days, not just in retrospective studies that look at how much exercise people used to get or have gotten recently and their risk for dementia.

But even in interventional trials that have put individuals on either a stretching program or an aerobic exercise program, followed them for a year, measured their BDNF levels, memory function, and measured the size of their brain's memory center on special scanning.

And these studies have demonstrated that those who exercise aerobically compared to those who didn't demonstrated significantly increased BDNF, better memory performance, and a larger memory center in the brain. That's work at UCLA and the University of Pittsburgh collaborative study, Dr. Erickson. And that's very, very compelling. You don't have to buy anything except a new pair of sneakers, and change your diet as well.

Dr. Jockers: Yea. And how would you recommend people get aerobic exercise? Would it be like doing maybe an hour of elliptical once a day or something like that, or three to five times a week? Or would it be kind of just periodic throughout the day, going out and taking a walk around the neighborhood, or a combination?

Dr. Perlmutter: To me, getting somebody to do something is the hurdle. I don't care if it's Rumba dancing, or an elliptical machine, or walking, or in my case running in the elliptical machine, whatever it is, rowing, swimming, you name it, biking. But you just have to get your heart rate up a minimum of twenty minutes, and I would say six days a week. If you can do seven days a week, so be it. If you're travelling and you miss a day, well, that's the way it goes.

But this is an extremely powerful way of altering your DNA expression. It will create this chemical that will save your brain. And there's no proprietary product that you need to buy here. Just go out and do it.

Dr. Jockers: Yea, just get out and do it. I know, like my wife and I, we take a walk around the neighborhood every night, every evening with our kids. And it's kind of a way we connect and get the exercise. And we've got hills and all kinds of stuff like that. And we both exercise on our own on a regular basis.

But I find telling a lot of my busier patients, just having them get out and try to use it as like a family time, where you're able to connect with

your spouse or friend, or even if you're like on a phone call or something like that. Get out and start walking around your neighborhood. Just get moving can have such a profound effect on your body. It feels so much better.

And so let's talk about some of these neuro compounds like glutamate and GABA. I know ketones have the ability to balance this ratio of glutamate to GABA. So can you fill us in more on that?

Dr. Perlmutter: Well sure. Let me take a step back, though. There is a tendency to say well some hormones, neuro-peptides are bad, some are good. And, you know, over the years obviously glutamate has been castigated because we know that glutamate does play a role in activating certain receptors in the brain and NMDA receptors that then allow calcium to flow into the cell and ultimately damage the mitochondria.

Glutamate toxicity has been looked at by Dr. Jeffrey Rothstein at Hopkins in terms of its putative role in Lou Gehrig's disease. But glutamate is the number one neuro-transmitter. So it plays a very fundamental role in the brain as well. People have talked about you've got to avoid monosodium glutamate, because glutamate is bad. I think MSG is something to avoid. I agree with that. But again, let's not focus on glutamate necessarily being bad or good.

And conversely, the same thing with GABA. GABA has been associated with a calming effect on the brain. That's obviously a good thing. But I think it's really about balance. And I'm going to take the conversation right now to the gut.

And why am I going to do that? I am going to do that because it relates to neurotransmitters, like others including serotonin, norepinephrine, and dopamine, which will make it more complicated. We now understand that the gut, and specifically the gut bacteria, is playing a central role in the production and the manufacture of these neurotransmitters.

And therefore, theoretically at least, but there is a study to back this up now, it plays a role in the regulation of things like mood. If our gut bacteria help to balance or are involved in disrupting the levels of these neurotransmitters, that then has an effect on how the brain works. We've got to pay attention to what's going on with the gut in terms of the bacteria and how we treat our hundred trillion bacterial friends in terms of how we nurture them or how we are disruptive towards them in terms of our lifestyle choices.

Dr. Jockers: Yep, yep, absolutely. Our gut is really, really key. That's because glutamate to GABA, glutamate is kind of this acceleratory. It kind of helps us think sharply and quickly. GABA helps us calm us. So we want to have that good balance where we're thinking sharply and

quickly, but not feeling anxious and overexcited. And a lot of people when they get adapted to ketones, on a ketogenic diet, fasting, they just notice this balance kind of as a mental and emotional calmness that comes has a lot to do with that, down-regulating the inflammation in glutamate to GABA balance. Let's talk about mitochondria.

Dr. Perlmutter: Let me just take that last thought a little bit further.

Dr. Jockers: Yea.

Dr. Perlmutter: And that is because a lot of people suffer from peaks and valleys energy wise. And you talked about balance. And, you know, so many people grab whatever they can for breakfast. Generally that's a high carbohydrate meal, unfortunately.

There's nothing really great about having a huge spike in your blood sugar from having a bagel and a glass of fresh-squeezed Florida orange juice, whatever it may be, with nine teaspoons of sugar. Your blood sugar spikes, your insulin level spikes, your blood sugars then plummet. And that is the cycling that you refer to. When your blood sugars plummet, you are not able to focus, your mood changes and you don't feel great.

And your only answer is to get your blood sugars back up, and you need to do it quickly. And you respond by grabbing something at ten o'clock in the morning, whether it's something out of the vending machine or whatever it's going to be, or you brought something along. Generally, people in that situation will grab a high carbohydrate, probably high in sugar snack, their mid morning snack.

So they're perpetually in this situation where they are cycling between high and low blood sugars. And you're right, that's not the stability, the calmness that allows people to regulate their moods and to focus on the task at hand.

It's really looking at comparing that scenario to burning fat as a fuel. And it's akin in my mind to either throwing some gasoline on a fire and poof and it's done, or the notion of an oil lamp where that flame burns at a constant rate throughout the course of the day and does its thing.

That's where people, I believe, should be, where they're constantly able to either tap into the foods that they have eaten which are higher in fat, and/or their body fat as a depo or repository for caloric fuel. So that is the shift that happens when people fast or otherwise get into ketosis.

Dr. Jockers: Yea, absolutely. Just going back to what you were talking about, I mean I look at preschools and elementary schools, and obviously most of the kids with the breakfast that they serve or most of

the kids with their eating is high sugary, high carbohydrate foods like we're talking about.

And then it's like snacks. Like they have a mid-morning snack, lunch, mid-afternoon snack. They're not going two or three hours without some sort of snack. And typically it's this high carbohydrate snack. And I grew up going to public school doing all of that. And I fortunately never got the diagnosis, but I'm sure if somebody looked at me I would have been diagnosed with ADHD. I had trouble concentrating. I would always constantly put my head down and just sleep.

It wasn't until really in my early twenties when I started understanding how to use my body, how to work my body as personal trainer. I started understanding nutrition and reading the kind of content that you put out and many other people, Dr. Mercola and what not. I realized that, oh, I can actually take back my brain.

And then from there it was amazing, because I actually went to the top of my class. I went from a struggling student to the top of my class by changing my nutrition and changing my lifestyle. And this is what's going on. So many kids out there, their potential is lying dormant and being tarnished because they just don't know how to take care of themselves. And they're in a system that's teaching them all the wrong things.

Dr. Perlmutter: Well, two comments. First, I would have been right there with you in the ADHD group, I can assure you, when I was a kid. They didn't have that as a diagnosis. They didn't really offer it up as a diagnosis until there were drugs. Oh, then suddenly it became like fibromyalgia, which we in integrative medicine were working on for years. It never became part of the public domain until drugs were invented that were utilized for the problem.

With that said, yea, kids get pounded with sugar even before they go to school. I mean if you look at the amount of sugar in baby food. You know when we were working all night in the hospital as residents, we used to spend a lot of time on the pediatric floor just raiding the refrigerator and eating the baby food, because it was so sweet. It was in the days when we didn't realize what we were doing to ourselves.

Dr. Jockers: The secrets of ER doctors, right? Yea, absolutely. So, let's talk about the brain and mitochondria. So obviously we know that the brain is the most dense area of mitochondria. So let's talk a little bit more about what mitochondria are and what happens to the amount of mitochondria and how they function when we're in ketosis and we're doing things like fasting.

Dr. Perlmutter: I think that most of your viewers have heard of mitochondria. It is in the mitochondria that the fuels that we provide

are utilized to create energy that ultimately powers the cell, powers the tissue, and powers the body. It allows you to perform your mental activities, etc.

And as you mentioned, brain cells are among the highest in terms of their mitochondria content. There may be as many as one-thousand mitochondria in a given brain cell, because the brain utilizes such vast amounts of our energy metabolism moment to moment. I mean in a resting state, whereas your brain might weigh three percent of your total body weight, it's using twenty-five percent of your resting energy as we sit here right now. Hopefully mine is. Hopefully yours is.

With that said, I think it's really very important to understand a couple of points. First, the ideal fuel for these mitochondria is fueling them with ketones. That is the super fuel, creating higher amounts per gram of what are called ATP molecules in comparison to glucose. Beyond that, it does so with a reduction in the amount of damaging free radicals in comparison to glucose.

But beyond that, there are some other issues with the mitochondria that are enhanced on a ketogenic diet or being in ketosis. And they include what is called mitochondrial genesis, or mitochondria biogenesis, meaning the growth of more mitochondria. And they even enhance the process of autophagy, whereby these mitochondria are destroyed, which is a good thing.

When there are defective mitochondria, we need to have this mitophagy happen, where those bad mitochondria are actually destroyed. Then two things happen. They're not inefficiently creating energy. And they're not replicating and passing on bad genetic information to the next generation of mitochondria. So that's very, very important. And so we've really got to nurture these derivatives of bacteria called mitochondria.

Dr. Jockers: Yea, absolutely. And would you say that the mitochondria are one of the big factors in people going into ketosis when they're practicing fasting as sort of a lifestyle? They have greater resiliency to stress, right? They have the ability to adapt to stressors around them. Do you credit that to this increased amount of mitochondria and better functioning mitochondria, because we kind of get rid of mitochondria that are inferior or poorly functioning?

Dr. Perlmutter: Well ultimately yes. You know stress is any event that is really aberrant or takes you out of the normal or is unexpected and unanticipated. And I think that just the overall balance of having the brain fueled appropriately really goes a long way towards keeping that balance and letting stress be less effective. But what we do understand, it actually gets back to something we talked about earlier.

Stress creates a fundamental chemical called cortisol, which is made in the adrenal glands and then feeds back to the brain. And ultimately either in a persistent way or at very high levels it is actually damaging to the brain's memory center. So high levels of cortisol or cortisol at even a more modest level over a protracted period of time leads to death of brain cells in the hippocampus. On the other hand, we offset that with higher levels of BDNF to grow back new brain cells in that same area.

Dr. Jockers: Okay, so getting that right balance there, the right amount of cortisol, the right amount of BDNF, absolutely. Alright, let's see, how about extended fasting? We talked a little bit about intermittent fasting and how you apply it. How about extended fasting?

I know there are some interesting studies talking about like an alternative day twenty-four hour fast done on mice and some of that had profound impacts there when it comes to autophagy in the brain and cleaning up the brain. So what has been your experience? What have you seen in the research with extended fasting?

Dr. Perlmutter: Well, as you may know, there are various clinics in Europe that are offering up really extensive long-term fasting, I mean for weeks. And they are purportedly demonstrating some pretty significant positive results.

I think a prolonged fast, I think anything more than about three days really needs to be done under professional guidance. Because what happens when you mobilize fat, especially early on for an individual who hasn't done this before or readily, is that you are off-loading a lot of the toxic stuff that you've accumulated that is fat stored in your body over a lifetime. And you can become pretty darn toxic.

So I think that's a very important consideration, that you want to up-regulate your detoxification mechanisms with certain, for example, nutritional supplements. That's because a lot of people on a prolonged fast do get pretty sick.

Dr. Jockers: Yea, absolutely. Yea, so getting that proper, obviously working with somebody that's an experienced practitioner with this, can be really, really helpful. And getting the liver moving well, opening up all the drainage pathways, really hydrating your body well is the key. You want your body running like a river, not like a pond, where it is stagnant.

Dr. Perlmutter: If I may, even if we're not talking about an extended fast, even just the notion of getting into ketosis with dietary change, the use of MCT, etc., there are some issues that are not infrequent. And they include what we've talked about, that people don't immediately get in terms of their brain function. So you have to ease into it for some people.

But there are other things, like something called the keto flu. And it's actually very real, where people don't feel tip top. And I think we can help with that by making sure people stay really well hydrated and have adequate amounts of electrolytes like potassium, magnesium, even sodium, even salt, food related or even as a supplement. And finally, I think one of the biggest push-backs or events that occur that makes people less likely to want to engage further is constipation.

Dr. Jockers: Oh yea, big.

Dr. Perlmutter: The reason that happens, in my opinion, and I'm almost certain that this is true because we can fix it. It's because when people are on a ketogenic diet, they really want to cut their carbs. And generally that's a good recommendation. It's what you should be thinking about. But recognize that dietary fiber is a carb and you don't want to stop that.

Dr. Jockers: Yea.

Dr. Perlmutter: You're not going to be adding calories to yourself by having good levels of prebiotic fiber in your diet. You're going to be giving bulk to your diet (a), and (b) you're going to be nurturing your gut bacteria.

Dr. Jockers: Yea.

Dr. Perlmutter: So by all means, I think focusing more on net carbohydrates, so we get rid of the notion that dietary fiber is a carb that's going to keep you out of ketosis. And welcome fiber back to the table, because if people jump into this and become constipated, they're going to say, hey, I'm going to rid myself of things and not be constipated. It's a real put-off for certain people.

Dr. Jockers: Yea, constipation is no fun. That's for sure.

Dr. Perlmutter: And it's totally unnecessary.

Dr. Jockers: Oh yea, exactly. That's right. And so net carbs are your total amount of carbohydrates minus fiber, and also sugar alcohols would be subtracted there. But the main one we're talking about here is fiber. So what are some of the best ketogenic prebiotic foods that people should be including?

Dr. Perlmutter: Well, you know, fortunately, they are some of my favorites. Garlic, onions, and leaks are high on the list, really high in prebiotic fiber. Mexican yam is a real good choice. Jicama, also Jerusalem artichoke. There is some level of prebiotic fiber in most vegetables and even in some fruit.

But I would say that if you're going to use a supplement, which I generally do, I like taking a supplement from acacia. Acacia tree, that big tree in Africa that has a big canopy, and you see the giraffe underneath it. It secretes a resin or a gum, acacia gum. That is then generally sustainably harvested. It doesn't affect the tree.

And it is turned into a powder that is organic. And it's sold in health food stores here in America. And it's a wonderful prebiotic fiber which has a really distinct advantage in that it doesn't, like other forms of prebiotic fiber, cause gas. So I like acacia gum a lot.

Dr. Jockers: Acacia, so that's a great one. And then include all those healthy foods that you talked about, leaks, onions, garlic. I like radishes. I think radishes are a great one. Avocados also are a great ketogenic food.

Dr. Perlmutter: Avocado is one of the most wonderful fruits ever on the list.

Dr. Jockers: Absolutely. And you know, olives, we talk a lot about olive oil. We don't talk about olives. Olives are a great prebiotic, mineral rich, trace mineral rich food as well.

Dr. Perlmutter: Yea. And mentioning olive oil, what a wonderful food. When you look at what's called the PREDIMED study, where we saw the health benefits of the Mediterranean diet, the PREDIMED study said, okay, we'll take the Mediterranean diet. We'll make it even higher in fat by adding nuts or olive oil.

While the addition of both was helpful, but olive oil was even more so in being associated with a profound reduction in people on the Mediterranean diet with added olive oil, added fat, in terms of reduced risk for dementia.

So olive oil is a terrific food. I would certainly raise the issue that when you go to a restaurant and you ask for olive oil, almost always it's not olive oil. Don't be fooled. Restaurants are not going to be giving out high quality extra-virgin olive oil. Why? Because it's way too expensive. So what I do, and it sounds kind of wonky, but when my wife and I go to a restaurant, we bring a little bottle of really high quality olive oil. Nobody makes a big deal about it. And we use it with our dinner.

Dr. Jockers: Yea, I'm right there with you. The restaurant I take my wife out to dates a lot of times is Ted's Montana Grill out here, because they've got bison, free range meat. We're able to get vegetables, no grains, and things like that. But the olive oil they had was fifty percent corn oil. I'm like, "I'm not putting that in my body."

Dr. Perlmutter: Or canola, and generally it's typically 49 percent corn oil or canola oil, and then 51 percent olive oil, which because it's 51 percent, it allows them to say olive oil.

Dr. Jockers: Yep.

Dr. Perlmutter: You know what you can do if you really want to be a bit of a pain, say oh by the way, can I take a look at the bottle, where it came from? And it's usually a great big bottle. It's usually clear plastic. And it tells you the contents. And then you wonder why it's so slippery and doesn't have that little bite at the end of olive oil, that you want to look for, which is an indication of higher polyphenol level. So I bring my own. I mean it's a bit unusual, but so am I.

Dr. Jockers: I'm right there with you. I mean we bring a little bag. And we've got olive oil. And we've got our own butter. We'll bring our own grass fed butter, and we'll put it on there. We want a lot of healthy fats in our food. We'll bring our own herbs, too, because they may not have enough herbs, or salt, things like that. So a lot of times we'll do that.

And you're right, nobody says anything about it. And we order healthy meat and vegetables, and we enjoy a great meal. So it works out great. Let's talk about how you personally practice. You talked a little bit about your intermittent fasting schedule. Let's talk more about that and what your typical meals look like on a regular basis.

Dr. Perlmutter: Well, I don't know if there's a strict definition as it relates to intermittent fasting. I guess it means fasting from time to time. But the part that is a little bit open ended is how long of a fast is that? Is skipping breakfast intermittent fasting? I would indicate that absolutely it is. When somebody misses their morning meal and checks their ketone levels at noon, they're increasing, and that's a good thing.

How often do I do that? At this point, it's every day, just about, unless I'm at an event. So I guess I intermittently fast every day. Do I do it ever longer than that? Yes, I do. I'd say probably about once a week I won't eat until evening time, which sounds a bit draconian. But I know my body. It's what works for me. I can still go to the gym. I can still do everything. I can write and be with the program. But I'm not suggesting that's the best thing for everyone. But that's what I think intermittent fasting is all about.

Dr. Jockers: I mean I'm right there with you. I mean both you and I are very lean. We're like ten percent body fat or less. And I actually do a twenty-four hour fast two days a week. And I always thought that I would lose. You know my whole life I've never wanted to lose weight. I've always been wanting to gain muscle. And I thought I would lose weight. And I actually find that I'm stronger. I'm more mentally efficient.

So typically, like I haven't eaten since yesterday at lunch time. It's typically Wednesday to Thursday, and then one of the days on the weekend. And I've got little kids, too, so it helps. When I don't eat dinner, I focus on feeding them, which helps my wife. But I find that I'm just so much more efficient, so much more resilient doing this. And I'm strong, I'm mentally efficient. So I've just adopted this and found it to be a great lifestyle. And it's not like I'm trying to lose weight on it. I actually would love to gain weight. Yet I still do this and do it effectively. So absolutely.

Dr. Perlmutter: Well, I'm going to say, I've often said in various interviews, I wonder who invented three meals a day? But now as I was thinking about it while you were just talking, I realized that it's not unreasonable to assume that three meals followed the invention of agriculture.

Why? Because that whole experience really changed the playing field in terms of macronutrients shifting from high fat, adequate protein, low carb, to a diet that's really carbohydrate-centric. So I think because of that, then we have as I mentioned earlier these surges in blood sugar and insulin, which demand that you cater to that. But you respond to that, hence having lunch after breakfast, having dinner after lunch. So I think that the three meals a day thing is an outgrowth of that. And it's not written anywhere that you must eat three meals a day.

Further, the notion that breakfast is the most important meal of the day, I'm wondering if that came from Madison Avenue in an attempt to have mothers serve their kids some kid of a high carbohydrate cereal, because it's quick and easy, or waffles from the freezer into the microwave. Yep, I was a good mom or a good dad, because breakfast was the important meal. Here's a tall glass of milk, a tall glass of orange juice, and a waffle with maple syrup. And frankly show me maple syrup generally that's actually from a maple tree. It's corn syrup. Read the label, you know from GMO corn, the truth be known.

Dr. Jockers: Yea, absolutely. And, you know, you can have like the Spartans, there's a famous movie, "The Three Hundred." And these warriors, they were well known as the strongest, toughest warriors. And these were people that typically ate once a day. In the evening they feasted. And they fasted all day, and they feasted in the evening. That was just part of their culture. And they were renowned for their ability to fight and to endure. That's a great term for it. So let's talk about when you do eat. What kinds of meals? What are some of your favorite meals?

Dr. Perlmutter: Well, kale is my favorite food. What can I say? I don't know why it is, but I eat kale every day. I cook it in the wok. I eat it raw. And avocados, I have avocados every day. But beyond that, there are wonderful books written about foods, meals, ketogenic diet.

There's a great book. Actually I have it right here on my desk, by Dr. Will Cole, called *Ketotarian*, which talks about being on a ketogenic diet and favoring a plant based diet. I think that really gets the point of the notion that if you're on a ketogenic diet, it's basically Atkins redux, and you're eating meat and eggs and dairy all day and that's it.

And again, that gets back to the constipation issue. No, you need to have lots of fiber. You need to eat lots of low, simple carbohydrate foods, which can have lots of total carbs and fiber and are full of vitamins. So I think those are the important points to think about.

I do eat a lot of wild fish, because I catch a lot of wild fish. I do have some grass fed beef and free range chicken, probably not much chicken. I do think that eggs are a terrific food, and I probably have eggs almost every day. I drink very diluted kombucha. And I don't feel restricted in any way. I mean I can take a walk and put cauliflower, Brussel sprouts, broccoli, lots of kale, some eggs that are scrambled and put that in some toasted pumpkin seeds. And then eat it covered with (you're making me hungry) virgin olive oil. And my gosh, I'm as satisfied as the day is long.

Dr. Jockers: Yea.

Dr. Perlmutter: In my situation, my wife happens to be a wonderful cook. So I don't do much of the cooking. I'm a good cleaner of the kitchen.

Dr. Jockers: You're the eater.

Dr. Perlmutter: It's great. So I'm fortunate in that regard. But we eat a lot of wild fish. As I mentioned, most of it we catch. We spend a lot of time, as fate would have it, living on a boat in British Columbia. So we catch wild salmon, prawns, crabs. And we make sure that we have a source of organic vegetables.

Dr. Jockers: Now that's really great, a great diet, and a great lifestyle there, catching your own fish and wild caught fish out there in the Pacific Northwest there in cold waters. So there's really tons of omega-3s. Salmon has got the Astaxanthin, so really, really powerful stuff.

Now Dr. Perlmutter, you are a four-time *New York Times* bestseller. You have contributed so much to this natural health movement, this ketogenic, intermittent fasting lifestyle. Obviously you're well established, but what inspires you every day to get up? You've got a great website blog. You're constantly putting out great content. What inspires you every day to get this content out and make a difference?

Dr. Perlmutter: I think that inspiration really came from, you asked the question what inspired me to write *Grain Brain*? What was going

on back then was here I am practicing neurology, having been in a very mainstream, traditional neurology practice. And I realized we were treating symptoms, not treating disease. We weren't treating the underlying problem. And I began to explore what it was that seemed to underlie these conditions.

And even back then, long ago, we're talking well before *Grain Brain*, twenty years ago, twenty-five years ago, literature was appearing that showed these relationships between an individual's lifestyle choices and his or her risk for developing neurodegenerative conditions, where you and I started off today. And I realized that while that was appearing in the scientific literature, no one was leveraging it in the clinic.

No one was applying that information day to day, face to face with patients and saying, look, here's what this literature shows. You really ought to consider this, in that your mother or your father had Alzheimer's. Or you may be APOE4 positive. For whatever reason, you may be at risk. Frankly, we're all at risk. You should consider a dietary change and more exercise, on and on.

And over the years, I've pretty much remained alone in that pursuit. So I've kind of gotten the sense that it's my destiny. That whole notion was absolutely reinforced when my father died of Alzheimer's disease, and it really solidified me sensing that this is my purpose in life.

Dr. Jockers: Yea.

Dr. Perlmutter: I love the literature. I love connecting seemingly disparate dots in terms of disease causality. And I'm not here necessarily to curse the darkness, rather to light the candle, to pave the way for people to not suffer personally, to not suffer emotionally in that certain sense when a loved one has been diagnosed with an incurable neurodegenerative condition. It's a very, very big issue for us that isn't looked at.

I had the opportunity just a couple of months ago to speak at the World Bank about the global implications of the Alzheimer's epidemic. And, you know, somebody has to do this, because it is capturing the planet. And no one in the general population is aware of what's going on in the background. And you opened our interview talking about the effect of lifestyle choices. And it's profound.

So that absolutely motivates me. I love science anyway. And again, when I connect dots that are so far apart and make sense out of them and have these aha moments, I find it very, very fulfilling, very rewarding.

Dr. Jockers: Yea absolutely. Well, you know, you are an inspiring leader in the functional medicine movement, and just the overall

ketogenic fasting lifestyle that we're talking about in this summit. You have definitely pioneered and influence myself and many of the other speakers. I just want to acknowledge that and thank you for all of your contributions.

Dr. Perlmutter: Well I appreciate that very much. And I appreciate this venue and the opportunity to share this information.

Dr. Jockers: Absolutely. Where can people find out more about you? And what kind of projects are you working on now?

Dr. Perlmutter: Well, first of all, to find me, it's drperlmutter.com. And I would say the typical social media, Facebook--David Perlmutter, MD. And if people go to drperlmutter.com, we have an extremely robust searchable database of research papers that really support all the stuff we're talking about. And I would encourage people to go there. Sign up for a free newsletter. It goes out every week.

What am I working on right now? *Grain Brain* was published five years ago and has been fully revised. And that will be coming out soon. So truthfully, that's done, so nothing more to do there except the marketing of that.

I'm editing a book called *The Microbiome and the Brain*. That will be out in early 2020. And that is a book written by twelve authors, each writing an individual chapter, from the most well respected institutions, I think, on the planet. That's very, very, exciting.

And then also, in January 2020, we will be publishing a book written with my son, Austin Perlmutter, who is an internal medicine MD. And this book is called *Brainwash*. And it's about reconnecting. It's about reclaiming your good brain, and what the influences are in modern society that are really keeping us from that, how to distance ourselves from those influences, and regain our connection to being the good people that we really are.

Dr. Jockers: Awesome! Sounds good! I can't wait to get those books and read them. I love keeping up with all your content and everything that you're doing. So thanks again, Dr. Perlmutter.

And for those of you guys that are out there listening, if you're getting value out of these interviews, I just want to remind you that fasting has the ability to unlock the dormant healing potential within you. It's safe, it's powerful, and it just might transform your life.

And if you want to get extra inspiration, motivation, and resources, I want to encourage you to consider owning the entire Fasting Transformation Summit for yourself. That way you have lifetime access

to it, the MP3s, the videos, the transcripts, everything you need.

And it's particularly good when you first start fasting, or if you're doing an extended fast. You can be listening to these interviews on a regular basis to encourage you and give you support. So if you would consider that, we would be honored. And we will see you on a future interview. Be blessed, everybody.

Fasting to Stabilize Blood Sugar & Diabetes

Guest: Dr. Brian Mowll

Dr. Jockers: Well hello everybody! And welcome to “The Fasting Transformation Summit,” where we are uncovering the most ancient and revered, inexpensive and powerful healing strategy known to mankind, fasting. I’m your host, Dr. David Jockers.

And I’ve got a great guest today. This is Dr. Brian Mowll, who is known as the diabetes coach. He runs Sweet Life Diabetes Health Center. He’s the host of “The Diabetes Summit” and the “Mastering Blood Sugar” podcast. So whenever I think about diabetes, I think of my man, Dr. Brian Mowll. And we have got him on to talk about diabetes and fasting. So Brian, really great to have you on with us!

Dr. Brian: Thanks doc! Yea, these are always great conversations. We’ve done a number of these together. And they are always a lot of fun and packed full of information. So I’m excited to dive in with you here today.

Dr. Jockers: Absolutely! And so let’s start with what the difference is between type 1, type 2, and type 3 diabetes.

Dr. Brian: Great question! Well type 3 diabetes is not officially a type of diabetes. And there’s another one that I’ll throw in there, which is type 1.5, which is also an unofficial title. But type 1 and type 2 are certainly classified as diagnoses.

And they’re very, very different. In fact, they’re completely different diseases. I almost wish they didn’t share the same name, because the mechanism behind each of them couldn’t be more different.

So type 1 diabetes is an autoimmune disease, similar to something like rheumatoid arthritis or lupus or Hashimoto's thyroiditis, where the immune system of the person targets the pancreas, a specific part of the pancreas that makes insulin. And it targets it basically for destruction.

And the causes of autoimmune disease are many and varied and complex. But the end result here is that the person who acquires this disease or has this disease loses the ability to produce the hormone insulin, which is the hormone responsible for taking glucose out of their blood from diet and other sources and putting it into body cells to be burned for fuel.

So when you have type 1 diabetes, which by the way is typically diagnosed in children or young adults. So it ranges anywhere from just a few months old, typically somewhere in the 4, 5, 6 to 10 range. But then it can be also be diagnosed really all the way through young adulthood, 16, 17, 18 years old, or early twenties. So that's the most common time to be diagnosed with type 1.

It's an autoimmune disease. It destroys the insulin producing cells of the pancreas, leading to a deficiency in the hormone insulin, so you cannot control your blood sugar anymore. And you also can't control the dumping of sugar from the liver into the bloodstream. So you've got sugar flying into the blood stream, which can become very dangerous and cause all sorts of problems.

So the treatment for that is injecting insulin. That's really the only treatment for type 1 diabetes. Now there are ways to help people with type 1 diabetes require less insulin. But they still will always need external insulin.

Now type 2 diabetes is completely different. It's typically diagnosed in adulthood, so commonly forty and above, forty, fifty, sixty, years old; although we are seeing younger people diagnosed with type 2 diabetes. In fact, it used to be juvenile diabetes and adult-onset diabetes. But we're seeing some of these lines crossed, where now kids, unfortunately, are being diagnosed with type 2 diabetes. And that is due to not a deficiency of insulin, but an inability to properly use the hormone insulin.

And I don't look at type 2 diabetes as a disease at all. I look at it more like a dysfunction. The pancreas makes insulin like it's supposed to. But the body cells, particularly in the muscles, liver, and fat, no longer respond to the hormone insulin. So the net effect is that the body still can't get sugar into the cells to burn for fuel. So it still builds up outside the cell, and we still get high blood sugar.

But there's a very, very long, usually, development period for type 2

diabetes. Now I said it can happen in kids. Usually that's with sort of this unique set of genetic circumstances, plus a really bad lifestyle with a highly processed diet, lots of sugar, overweight, obesity. But it can happen in kids. But typically it develops over decades, ten, twenty, thirty, forty years of damage being done to these cells and organs, which make them resistant or unresponsive to insulin, which leads to the problem.

Now, there is also something called pre-diabetes, which is like the step before type 2 diabetes. It's the same cause. It's the same mechanism. It's just sort of a phase of broken blood sugar metabolism before you get into the range where you're considered diabetic. And we can talk more about that in just a few minutes.

But just to finish the answer, type 3 diabetes, what's typically called type 3 diabetes, is diabetes or insulin resistance of the brain. And there's a strong connection to Alzheimer's disease, and really all forms of dementia, Lewy body dementia, vascular dementia. So when the brain becomes insulin resistant, there are all sorts of problems that happen. And it's been shown that the brain will build up these amyloid plaques. And that can lead to dementia.

It also interferes with the brain's ability to take in glucose and burn glucose for fuel, which can lead to cell damage in the brain. So type 3 diabetes has sort of become a name that describes the connection between Alzheimer's disease and other forms of dementia and blood sugar dysregulation, particularly insulin resistance.

And then lastly, type 1.5, just to wrap up this segment, is a host of diabetes diagnoses that don't fit the other ones. There's something called LADA, which is the most common. That stands for latent autoimmune diabetes of adulthood. It's similar to type 1. It's an autoimmune form of diabetes, but it affects adults rather than children. And it's much more slowly progressing.

Now this is important, because many people will go to their doctor and be diagnosed with type 2, but their blood sugar skyrockets. And it's not well controlled by diabetes medications. They don't seem to fit. Many times they're thin. They're not overweight at all.

And when we then look at them a little bit more closely and run some functional medicine tests or some functional diagnostic tests, we find out that, no, you actually have autoimmune diagnosis, which needs to be treated completely differently than a typical type 2 case. And often times that's missed by conventional medicine. So many different ways that diabetes can manifest in the body.

Dr. Jockers: Yea, absolutely. And that's just proof that diabetes is a lot more complex than what most people think. And so what are some of

the lifestyle strategies that you use to help people overcome diabetes?

Dr. Brian: Yea, well that's great. And that will kind of bring us into fasting, which is obviously the topic of this conversation. We will do things like the lifestyle intervention that has been shown to be the most effective for blood sugar control, regardless of the type of diabetes--so type 1, type 1.5, 2, pre-diabetes, type 3 diabetes--which is a low carbohydrate or ketogenic style diet.

Glucose, which is the primary issue once you have diabetes, elevated glucose levels in the blood, should be minimized or eliminated, because obviously the more glucose you put in, if you're already glucose intolerant, which is another name for pre-diabetes, the more glucose you put in, the more stress you're putting on the system. So we want to minimize the glucose coming into the body.

Therefore, we want to minimize the carbohydrates coming into the body. So a low carbohydrate diet has been shown time and time again to be the most effective dietary strategy for controlling blood sugar.

A ketogenic diet takes it to another level. And then you have the added benefit of having ketones, which have been shown to be really effective for what we could call type 3 diabetes, which is the diabetes or insulin resistance of the brain. It gives the brain that alternative fuel source, which burns cleaner and requires less energy and can actually be even more effective than burning glucose.

And there are other benefits, of course. And I know your audience has probably heard lots about ketogenic diet. But that can be a really good strategy. And there are studies to back that up for diabetes and blood sugar control as well. So that's one.

The second is obviously physical activity. And fitness is really important. Physical activity will help you to metabolize glucose better. It will help to improve the way your body uses insulin. If you're type 1 and you require insulin, it will help you to require less insulin, because exercise in an independent way helps your cells take up and use glucose without even needing insulin. So exercise is really important.

So those are the two cornerstones. But then there are lots of other strategies. We could get into things like improving sleep quality and stress. And strategies like supplementation and fasting can be really helpful as well.

Dr. Jockers: Yea, absolutely! And so it's really a full lifestyle intervention. And so let's talk about fasting. How does fasting play a role in helping somebody with diabetes?

Dr. Brian: Yea, it's a good question. And it helps in different ways for the different types of diabetes. For people with type 1 diabetes, you have to be a little bit more careful with fasting. It can be used and it can be helpful. It's probably a little less therapeutically beneficial, but it still can be helpful.

It really is helpful. In fact it can be one of the most helpful things for people with pre-diabetes or type 2 diabetes. So we probably want to focus in those areas. Also, about ninety-six percent of diabetes is type 2. And pre-diabetes rates are 4 times that of type 2 diabetes rates.

So when you look at the amount of people with pre-diabetes and type 2 diabetes, it's almost half the population of the U.S., at least a third and almost half the population. So those two together really are a huge, huge issue. And that's where fasting can be so beneficial.

So to understand how fasting benefits diabetes and blood sugar, we have to look at kind of the mechanisms. And again, we talked about how type 2 diabetes and pre-diabetes is basically insulin-resistance. So the cells have become resistant to insulin. And when that happens, the body raises insulin levels to overcome that resistance.

And when your insulin levels rise, it does a number of things to the body. It causes basically a stress response. It causes an inflammatory response. It causes you to store more fat and basically shuts down your fat-burning metabolism. And it causes fluid retention in the kidneys, which raises blood pressure and causes other issues with electrolytes and minerals and so forth. So all of those things happen from high insulin levels.

So this is why we see people with pre-diabetes and type 2 diabetes often times are overweight, often times have high blood pressure, and cardiovascular stress due to the inflammation. And you can see where all the complications come in, sexual dysfunction, kidney problems, problems with the small blood vessels of the eyes and the extremities, which can lead to amputation and blindness.

This is all due to not only high blood sugar, but high insulin levels. And, in fact, some researchers say the insulin is the bigger culprit. So what we want to do is we want to help the body become more sensitive to insulin. And we want to lower the blood insulin levels.

Every time you eat food, no matter the food, you're going to release some insulin. Now you're always releasing some insulin around the clock, basically a steady state of insulin. It's what called your basal production, baseline production.

But every time you eat food, you're going to go into a different phase of

insulin production. You're going to release a small surge or a large surge of insulin based on what you eat. So if you're eating a lot of carbs, if you were to eat a bowl of oatmeal, or if you were to eat a sandwich or a pizza or a bowl of pasta, you're going to release a huge surge of insulin. If you're eating a couple of cups of broccoli and some fish, you're going to release a small amount of insulin, almost none, but still some.

But every time you eat, you release some insulin. And if we want to get your insulin levels down and help you become more sensitive to insulin, it's beneficial to have long periods of time where you're not eating at all. And that's where fasting comes in.

So intermittent fasting can be helpful, where we stretch your overnight fast into from twelve hours to perhaps sixteen or eighteen hours. And we can talk about how we stretch that. Sometimes we stretch that at the beginning. Sometimes we stretch at the end.

And then there are benefits to doing a full day fast, a twenty-four hour fast, or alternate day fasting where you take a full morning to night and not eat at all. And there are benefits also to longer term fasts. And, of course, each of these has to be matched to the individual client or the person that we're working with.

But the bottom line is long periods of time without eating allow your insulin levels to fall and allow your cells to become more sensitive to insulin. There are studies that show that when you're not eating, your insulin receptors actually become up regulated. And in fact, you may even produce more insulin receptors to try to help find more insulin.

So all those things are beneficial. We can also mention other benefits of fasting, which include weight loss, increased fat burning, increased recirculation of damaged cells and protein, apoptosis. So it essentially helps the body rejuvenate, rebuild itself healthier, and all of those things are going to help blood sugar.

Dr. Jockers: Okay, great. And so would you say that fasting really should be one of the foundational strategies of somebody with pre-diabetes or type 2 diabetes should take? And if so, what kind of precautions should somebody take as they begin to fast?

Dr. Brian: Yea, I think so. I think so. If you look at diabetes as sort of an abundance issue, so it's an overabundance of food, calories if you will, food energy, and abundance of insulin, which responds to that abundance of food. Then doing the opposite, which would be fasting, really is probably the most effective method of reversing that.

Now, there are a few precautions as you mentioned. If somebody is injecting insulin, and that could be someone with type 1 diabetes, but

many people, in fact over half of all insulin prescribed in the U.S. is prescribed to people with type 2 diabetes. So a lot of people with type 2 are on insulin also, which actually doesn't make a lot of sense, but it is common practice.

So if you're injecting insulin, you have to be a little bit more careful with fasting, because once you inject that insulin into your bloodstream, your body can only detoxify it at a certain rate. So if you don't eat for days and inject insulin, your blood sugar could drop dangerously low. And it could be almost impossible for your body to bring it up itself. So we will want to be careful in those cases.

Also, if we're using medications that force the pancreas to release more insulin. There's a class of drugs, for example, called sulfonylureas, that many people with diabetes are prescribed, that basically squeeze the pancreas into releasing more insulin all the time around the clock. And if you're doing that, that could be a precaution for fasting for the same reason that I mentioned earlier.

People with eating disorders, we have to be a little bit careful with-- people who, for example, have binged and purged in the past. It can sometimes trigger that same type of behavior if they're not careful, if they're not healthy and haven't dealt with whatever drove those issues to begin with. So I think that's something to be aware of.

And then lastly I would say people with other endocrine issues, like thyroid or adrenal dysfunction, that's not being treated properly. So somebody who has untreated hypothyroidism or severe adrenal fatigue, they could have a hard time with fasting and I wouldn't necessarily recommend they do it. Pregnant women and children probably don't need to be fasting. And I'm sure they could, but that's an area that I would be a little bit more careful with.

Dr. Jockers: Yea, absolutely. So really good guidelines there. So what are some of the best fasting strategies that you've seen work with people with diabetes? And how do you kind of ease them into it? Like what are your steps for how they can begin fasting and then ultimately what are the best strategies that you like to use?

Dr. Brian: Yea, one thing I tell my clients is that you're already fasting every day. So, you know, a lot of people will say, I don't know if I could fast. And so my response is well you're already doing it. So you definitely can do it. It's just a matter of extending that fast a little bit.

So let's say they stop eating at 8 p.m., and then they start eating the next day at 8 a.m. So they just did a twelve hour fast. So let's try to make that a fourteen or sixteen hour fast. So you're just tacking two or four hours on to the twelve that you've already fasted. It's really not a big deal.

So that's a good place to start, with intermittent fasting, where you just extend their overnight fast a little bit. So instead of breaking it at 8 a.m., you might break it at ten or eleven or noon. And then when you break the fast, I also tell our clients that yes, breakfast is the most important meal of the day. It doesn't have to be in the morning. It's whenever you have the first food you're breaking your fast. So breakfast is really your first food, whether that's at 8 a.m. or 5 p.m.

But how you break your fast is very important, because you don't want to break your fast with a load of sixty or seventy grams of carbohydrates. You want to break your fast with a really balanced, healthy meal. And so that's important. So we'll work on those two things.

Once people feel pretty comfortable with that, then we can start doing strategic fasting. So sometimes, we'll use something called early time restricted feeding. Time restricted feeding is the term used in the literature and research. And it basically refers to the eating period as opposed to the fasting period.

So time restricted feeding would be eating between say noon and eight or noon and six. Or in early time restricted feeding, you would eat perhaps from eight a.m. to noon or eight a.m. to say two p.m. And then you would fast the rest of the day.

And I found this to be really effective for insulin resistance, particularly people who have high morning blood sugars. So we see a lot of times people will have their highest fasting blood sugar in the morning. In other words, they wake up and their blood sugar is say 100. And then before they eat their first meal, it continues to climb up to 120, 130. And then when they eat, it will actually come down a little bit.

That's pretty common. About fifty percent of the people I see have that, whereas if they take their blood sugar right before dinner, it might be eighty-five or ninety. So that's called the dawn phenomenon. And it has to do with the dynamics of insulin and other hormones like cortisol, adrenalin, growth hormone, and glucagon, which all raise blood sugar.

So in those cases, I found that early time restricted feeding can actually be helpful. Because if they try standard intermittent fasting, their blood sugar often times continues to rise until they have their first food. So for example, again, they might wake up and it's 100. If they don't eat until noon, it might be up to 140 or 150 before they eat their first food. And that's not healthy.

So what we found in those cases is go ahead and eat first thing in the morning, but then stop eating at around 1, 2, 3, or 4 in the afternoon, depending on how long you want your fast to be. And then you're going to get that benefit of the intermittent fast without that rise of the blood

sugar in the morning.

Dr. Jockers: That makes a lot of sense. That's one of your key strategies right there. How about like alternate day fasting, anything like that? Do you have any experience with that?

Dr. Brian: Yea, so intermittent fasting can be helpful. But it's not really probably enough to reverse type 2 diabetes. If we want to do that, we really need to get the body in a fat-burning state and a caloric energy deficient state for a longer period of time. And that's where longer fasting comes in.

Interestingly, if you just try to cut calories, like is often recommended, there is sort of this myth that if you just can snip off five-hundred calories or exercise a little more and burn five hundred calories a day more than you're eating, that over a week that adds up to thirty-five hundred calories, which is about a pound. And you should lose a pound a week. It just doesn't work.

The body is way too dynamic and smart for that, and it's going to adjust. So if you try to just cut down your calories a little bit, by five hundred or eight hundred calories, instead of eating twenty-eight hundred calories, you try to eat two-thousand calories a day, I found that the body just adjusts to that within a few days. The metabolism adjusts so that you are burning less. And that doesn't really work long term for people.

So sometimes we need to do something like longer term fasting, because the body will obviously never adjust your energy usage down to zero. It's impossible. In fact, really anything under about eight or nine-hundred calories per day is almost impossible. So you're going to burn at least that much every single day, even if your metabolism is running really, really slowly.

So if you're fasting, you're going to burn more energy than you're consuming. There's no way around it. And sometimes that's what we need to do to get people to lower their blood sugar, lower their insulin, lose weight and reverse diabetes. So doing one day of that can be a little bit helpful. But doing more like two or three or four days of that or longer can be even more helpful.

Now you don't have to get down to zero calories. You could get down to two or three hundred or four hundred by doing some things like some bone broth and perhaps some lemon squeezed into your water and things like that. So you don't have to be purely water. But you want to be close to it if you really want to see the benefits for this for diabetes. So that's where the longer term fasts come in.

We usually start people with intermittent fasting. If they're successful

with that, we'll go ahead and do like a twenty-four hour fast, which means they will eat at lunch and then not eat again until lunch the next day, or dinner to dinner, and get them comfortable with that.

And then we'll typically go to like a thirty-six or forty-hour fast, where someone perhaps eats dinner on Monday and then eats their next meal at breakfast or lunch on Wednesday. That would be a thirty-six to forty-hour fast. And then from there, we'll extend even longer if their body seems to be responding favorably to that.

Dr. Jockers: Well Dr. Brian, this has really been a great interview. You've given us a lot of just great takeaways, great strategies to use with diabetes and really how to progress into fasting and strategies that people can be utilizing in order to get into that calorie deficit and start to get that insulin sensitivity. So any last words of advice for people? And also where can people reach you at?

Dr. Brian: Sure, yea. I would say that with fasting, fasting can be a great strategy, not only for short term, but long term health. And it's one of those things that we can all do. We all do it every single day. Don't tell yourself that you can't do it. You can do it. And it's just a matter of fine tuning and listening to your body.

I've often times done fasting personally where I set off to do a ten day fast, and on day two I just wasn't feeling it. So I pulled the plug. I stopped. I ate and then I tried again maybe a week or two later. Listen to your body. If your body is not up for it, you're tired, you're stressed, it's just not the right time. Then don't do it. Put it off, and try again. But don't give up, because you can do it. You can be successful with it.

And it does get easier as you fast more and more and longer and longer. It gets much, much easier. Your body gets adapted to be able to do it. And it's natural. We fasted for as long as we've been around as human beings. And animals fast. Everybody fasts. So you can do it. And it's natural.

If you want to find out more about me, it's drmowll.com. I have a blog every single week. We have video blogs where we answer questions every single week. I have that podcast, which is "Mastering Blood Sugar." They can find that at my website, or iTunes, Google Play, Stitcher. Just put in "Mastering Blood Sugar." And we have some amazing guests on there. It's great free education, a great way to learn more.

Dr. Jockers: Well, thanks so much, Dr. Brian, for being on. Definitely check out his podcast. Check out his website. And remember, fasting helps unlock the dormant healing potential within you. It is safe. It's effective. It's inexpensive. And it's extremely powerful. You can do it. We'll see you on a future interview. Bye bye!

Fasting to Prevent and Heal Heart Disease

Guest: Dr. Jack Wolfson

Dr. Jockers: Welcome, everybody, to the Fasting Transformation Summit. We are uncovering the most ancient, inexpensive and powerful healing strategy known to mankind, fasting. I'm your host, Dr. David Jockers.

I've got a great guest today. This is Dr. Jack Wolfson. He is a board-certified cardiologist who grew tired of patients failing to truly get well using pharmaceuticals and procedures. As a result, he opened Wolfson Integrated Cardiology where he now uses in-depth testing and targeted nutrition to prevent and treat cardiovascular disease. He treats the whole person, getting to the cause of the issue instead of treating only the symptoms.

Dr. Wolfson offers practical solutions for heart health in person at his office in Paradise Valley, Arizona. Love the weather in Arizona. It's no wonder why it's called Paradise Valley. He is the author of the Amazon bestseller, *The Paleo Cardiologist*. A great book that I personally have. A fantastic guy to improving your overall health, lifestyle and certainly to improving your heart health. So, Dr. Jack, really great to have you on today with us.

Dr. Wolfson: It's fantastic to be on with you. I'm just so impressed with all the content you put out there. I'm really trying to bring this information of health and wellness to the entire world. I think it's exciting times right now. The health revolution is on. I came from the medical sickness model. I saw so much sickness, so much disease, the pills and procedures, and nobody is really getting better. To come over

to the health and wellness side to be around luminaries like yourself is really exciting for a converted cardiologist like me.

Dr. Jockers: Well, thanks so much. I appreciate that. And, by the way, if you were wondering Dr. Jack is actually a phenomenal dresser. In fact, our Keto Edge Summit he actually had a suit on and looked awesome. He's actually traveling with his family, literally around the country. You're in Colorado right now and in a sense, looking for direction of where you are going to live. Is that correct?

Dr. Wolfson: Well, life is about change and personally we've been in Arizona for 16 years. I spent 30 plus years in the Chicago area. I think we're ready for a new chapter. One of the things we're excited about is really being able to take health to a new level for us. That is, to find some acreage where we can have some farm animals, green grass and the outdoor lifestyle, to be able to really embrace all things health and wellness.

As far my tee-shirt this morning, you caught me a little bit off guard. I'm wearing Dr. Wolfson's proprietary tee-shirt. A little shameless marketing, not on purpose. It is an organic cotton tee-shirt. I'm in organic cotton shorts as we speak. I will let the audience leave that to their imagination. We're ready to roll and really bring it to everybody.

Dr. Jockers: Cool, man. Tell us your story. I know that your wife is a chiropractor who is an amazing woman. I met her at different conferences. You're such a great couple. Tell us your story really about how you became a cardiologist, how you met her and how you transitioned into integrative cardiology.

Dr. Wolfson: Most certainly. I became a cardiologist, like my father before me. My father was the first Doctor of Osteopathic Medicine at the Cleveland Clinic in 1970, 1972. The first doctor in cardiology at the University of Iowa, a very, very prestigious cardiology institution. In 1975 he became the Head of Cardiology at the Chicago College of Osteopathic Medicine, in Chicago.

I totally followed in his footsteps. Not because I had any love in particular for osteopathic medicine. It's just what he was, what all his friends were. That's all I knew, so I went down that path, as well. I've become a cardiologist, but simultaneously, I see my father getting sick in his mid-fifties. He was diagnosed with depression and that turned into parkinsonism and eventually to a diagnosis called PSP, or Progressive Supranuclear Palsy.

At the Mayo Clinic, they told us, "We have no idea why he has this. We have no treatment for it and he'll be dead within a few years." My father died a tortuous, cruel death within those few years. Nobody could do

a thing about it. Nobody knew why. Then I met this twenty-something-year-old doctor of chiropractic.

She, Dr. Heather, tells me exactly why my father got sick. She tells me exactly all the causes of his illness. What she said made perfect sense. Here is this young doctor of chiropractic, who knows all the reasons why. Mayo Clinic has no reason why. What she said made perfect sense. I started to listen. I started to change.

We quickly fell in love. We quickly got married. We quickly had a beautiful family. It led me to open up our own practice in 2012. I eventually left the biggest cardiology group in the state of Arizona in which I was a senior partner, making big-time cardiology dollars. Bilking the medical system. Bilking the insurance industry for everything possible. I opened up my own practice and it's been a whirlwind ever since.

Dr. Jockers: Wow. Powerful stuff. Powerful story there. There's a great sense of humility on your part, to not think you had it all figured out. To be humble enough to listen to your now wife.

Dr. Wolfson: You see so much sickness in the cardiology industry. The hospital is a revolving door of sickness. Where somebody comes in, they have a heart attack, they're in congestive heart failure, or they had a stroke, whatever it may be. You'd "tune them up" and then you send them out. A few months later they come back in with the same problem or a medication complication. There's so much sickness and misery in that industry. To be enlightened by what is really common sense.

David, when you and I had this conversation, it's just common sense and medicine has lost all common sense. They've lost all of their ability to be rational thinkers and as to why people have problems. You get into this 10-minute patient visits, here's your pills, here's your prescriptions, and here's the tests I want you to do. A good luck type philosophy. It's such a failure. The public has awakened to that failure.

Dr. Jockers: Absolutely. I totally agree. Now that you're practicing integrative cardiology and really getting to the root cause, let's go over what the major root cause of heart disease really is and how lifestyle plays a role in that.

Dr. Wolfson: Back in the 1990s when I was in medical training, it was all about the Human Genome Project. We're going to learn about the genetics. We're going to find out why people have a disease based on their genetics. What we learned from that, is genetics has nothing to do with disease. It's all about how the environment affects our genes, affects our body and then leading to disease. Whether it's a stroke, cancer, heart failure, dementia, you name it.

What we try and do now is we try and teach the actual cause of cardiovascular disease. We talk about the importance of sunshine as fundamental. We talk about the importance of sleep as fundamental. We talk about the importance of organic food as fundamental to prevention. Getting stress out of your life. Increasing physical activity. Not hitting the gym for an hour on the treadmill while you're watching CNN. That is not healthy, physical activity.

We talk about the importance of chiropractic care as a foundation for cardiovascular health and wellness. We talk about once again, getting those chemical and toxins. We talk about evidenced-based testing. We talk about evidenced-based supplementation. Supplement the healthy lifestyle. When you do all those things, you are able to prevent cardiovascular disease on a meaningful level.

We know that the statin drug model is a failure. We talk about statin drugs. Statin drugs at best flow with the risk from here to here. That's not good enough, David, you know that. That's not good enough for you, for your family, for me, my family. It's wasn't good enough for my father. We don't want them from here to here. We want them to zero risk. We know their side cannot do that. We know their side fails. We know their data on their side. Clearly, our side is so much better. Because, the body is built to be healthy. The body wants to repair the damage. The body always wants to heal. It will if we just get the chemicals and the nasty lifestyle out of the way.

Dr. Jockers: Absolutely. Ultimately, bad lifestyle leads to inflammation. We know inflammation just damages the lining of the blood vessels and can cause a whole lot of different cardiovascular complications. You talked a lot about lifestyle factors. Let's go into fasting. How does fasting really improve? Can it improve our heart health? What have you seen in patients when they implement an intermittent fasting style of life?

Dr. Wolfson: Most certainly. Intermittent fasting is a big part of my practice. I've learned a lot of this stuff from luminaries like yourself and our mutual friends like Dan Pompa, and other people in the space that are doing some of this great, great work. Really, it just comes back to what makes common sense. Obviously, from a religious basis, there's such foundational benefits and knowledge of fasting.

When it comes fasting and the cardiovascular literature, there's plenty of information in there on how intermittent fasting helps to improve blood pressure. Helps to improve blood sugar. Helps to improve inflammation, and oxidative stress. How it helps to improve weight and weight loss. When you start to put all these factors together, there is a tremendous benefit to intermittent fasting.

Considering post-stroke and post-heart attack, there's actually evidence

that shows improvement in heart function, or stroke recovery when you put patients or even lab animals on an intermittent fasting program. The literature is rife with information that really helps regarding cardiovascular health.

Dr. Jockers: Absolutely. Fasting is such a powerful way to reduce inflammation in the body and stimulate hormones to help with tissue repair. It can be really powerful. What have you seen as a cardiologist, working with patients? I am sure you have a good percentage of your patients are coming in overweight, but you also have other people coming in normal weight, even underweight. What have you seen as far as fasting strategies for different folks?

Dr. Wolfson: Let me say this too. The medical doctors know that inflammation is a problem. This has been well documented. If you pull any cardiologist off the street, they're going to tell you inflammation is a problem and we have to deal with it with statin drug therapy and aspirin. Obviously, that does not address the cause of inflammation. They still have no idea what the cause is of inflammation.

Obviously, you talk about things like leaky gut. You talk about environmental pollutants coming in through the skin, the lungs, and the gut. That all leads to the body becoming irritated. The immune system just goes into hyperdrive and it's the immune system that creates all that inflammation and creates all that oxidative stress. What we need to do is a reverse engineer it and stop what is causing the immune system activation and then you will stop inflammation so on, so forth.

To answer your question regarding intermittent fasting. I think number one, intermittent fasting to me is a great way to break nasty habits. It's a great way to reset the system so we're not craving ice cream, cookies, cupcakes and alcohol. It's a great way to once again get people to break that chain of events. That's number one reason why I like intermittent fasting. Strategically when I use it in my office it's a great way to get people to lose weight, and once they start to lose the weight then all those other things fall into place. The blood pressure comes down. The markers of inflammation come down. The blood sugar naturally comes down. Insulin comes down.

Once we start to do that and the patients see the results, not only in the way they feel but also in the blood testing that we do. They get very excited by this approach. I love the idea of using intermittent fasting, for example, I start off people and have them do a 24-hour. Saturday night is their last meal. Sunday morning, they wake up and it is water for breakfast, water for lunch, water all day long and then have a sensible dinner on Sunday night.

The next thing I take them to is a 36, where on a weekly basis their last

meal is on Saturday night and then it is water, all day long, all Sunday, Sunday night and then they wake up to a greens juice on Monday morning. I find that very easy to do. Sunday is a day of rest. I tell people just take it easy, read a book, go for a walk, take a nap, watch a movie, watch some comedy on TV, watch a podcast or something like that. Just to really make a light sense of the day.

Spend some time with friends. I don't know about you, David and your experience with your patients, but I'm sure it's similar. It's very difficult to do the fasting, especially in the beginning while you're trying to work. While you're really busy. You want it to be a day of relaxation and recovery.

Dr. Jockers: Absolutely. That's the case. It's even better when the sun is out. You can get out in the sunshine. Just the cravings, and the desire. The dopamine hit we get from eating is a really tough impulse to get around. We get out in the sun, especially for grounding, barefoot on the grass, really helps to get a good neurochemical release. We just feel good. We don't have quite the same emotional and neurological dependence on a dopamine hit coming from food. Absolutely. Creating time and space when you first get started.

You don't have to think about work and performance, which can play a huge role with this. I love what you brought up in the beginning, talking about leaky gut, leaky heart. We know fasting is a great way to help seal the tight junctions and the gut to take stress off the gut. Every time we eat, we've got a really compromised digestive system. We're going to create more and more inflammation and tear up the gut lining. You've really pioneered this idea that heart disease is a huge component of leaky gut that plays a role in heart disease. Right?

Dr. Wolfson: Yes, most certainly. It's very clear from the literature. For example, elevated zonulin which is a protein that controls the tight junctions in the gut and the protein that lets things into the body that belong. If there's too much zonulin, then it's like a wide-open floodgate. That clearly is linked to increased cardiovascular risk, in the literature.

In addition, when you look at things like lipopolysaccharides, which are part of the wall of gram-negative bacteria and when those get into the bloodstream, and it's measurable, once gain markedly linked to cardiovascular risk. It also plays a role in what's called leaky test. When you have those leaky tests from metal amalgams from root canaled teeth, from infected teeth, from infected bone, all the bacteria gets into the blood.

The bacteria overload, once again, leads to immune system activation, which leads to inflammation, oxidative stress and eventually disease. When you have all those components floating around, now you have

that leaky endothelial lining in the blood vessels. All these damaged liquid particles get into the blood vessels and the immune system comes in to clean that up and then, you have disease. The cardiologists just don't get that whole phenomenon.

What my favorite testing is regarding leaky gut is looking at anti-actin antibodies where it is evidenced that your immune system is actually attacking heart muscle protein. That is just the holy grain cardiovascular information. We talk about all these things. Where do statin drugs fit into this model? Where does aspirin fit into this model? Where do ACE-inhibitors and angiotensin receptors blockers and beta-blockers and all these pharmaceuticals and the newest PCSK9 inhibitors for \$15,000 per year? Where do they fit into this health and wellness model? Obviously, they don't.

Leaky gut is so fundamental. Like you said, intermittent fasting helps you to heal the gut because it allows the body to take some time off to repair. Also, there's literature that says that intermittent fasting is beneficial to the gut microbiome. If the gut microbiome is healthy and is, therefore, producing things like butyric acid, and guterates, to nourish those colonic cells, you're going to heal the gut and therefore, heal the heart. It's so simple.

This is free. David, I know you talk about this. Intermittent fasting saves everybody money. You just cut out 15% of the food budget if you do it like I said. Once a week, you're cutting out all that food budget. If you go on extended, like you talk about and other people in the summit talk about, it's really so empowering for me to be in this space. To wake up from where I was to where I am now. Talking with luminaries like you and others on the summit, it's just so amazing.

Dr. Jockers: Absolutely. One of the biggest objections people like you and I get is a healthy lifestyle is expensive. It's expensive to buy organic food. It's expensive to buy supplements. Number one, we have to look at it as an investment. We invest in ourselves. Implementing fasting helps reduce that bill down significantly. That's really what we are focusing on here. Let's talk about a little bit about the concept of autophagy. For our listeners, autophagy is basically when the body repairs cells from the inside and fasting is one of the great inducers of autophagy. Do you know anything about how the heart cells are impacted by autophagy?

Dr. Wolfson: Almost certainly. Every part of the body has significant turnover, even brain cells, we now know have a significant turnover. The concept of autophagy where the body basically targets those cells for destruction, termination and a rejuvenation. All this can be improved by intermittent fasting.

One of the things that so many people talk about these days are stem

cells. Stem cells are those bone marrow cells that can become new cells around the body wherever they are needed. When you talk about the endothelial lining, the lining of the blood vessels. The lining in the blood vessels is constantly repaired, just like the lining of the gut is constantly repaired. When those old cells are damaged and have done their job, they need to be removed and they need to be replaced. Intermittent fasting can increase stem cell production and stem cell function. Once again, it just all stems from common sense.

There are strategies we can use to increase stem cell production. As you mentioned, just going out in the sun is going to stimulate stem cell production. I don't know if there's much in the way of literature about walking and standing barefoot, but maybe we can extrapolate some things.

Once again, it just makes common sense that electromechanical rejuvenation from walking and standing barefoot on earth will make a difference. Autophagy destroying those old cells and the organelles as well inside the cells, all those things that help to repair will be enhanced by intermittent fasting.

Dr. Jockers: Absolutely. This is a way we can really repair ourselves. I know there's no research on this, but I'm interested in seeing if someone has an aneurysm and they start applying some sort of intermittent fasting lifestyle, maybe an extended fast for seven days once or twice per year, what would happen over ten years to that aneurysm? I'd be really interested to see something like that.

Dr. Wolfson: An aneurysm obviously is a secular dilation of an artery and it can occur in the ascending aorta, transverse aorta, descending aorta, and the most common would be an abdominal aortic aneurysm. You can even have some in the legs. Certainly, there can be brain aneurysms. I would certainly agree with you. That is happening for a reason. We are not genetically programmed to have those things. We know there's certain risk factors. Whether it is hypertension, smoking, environmental pollutants and toxins that are involved in that.

I would certainly agree with you if we employ strategies like intermittent fasting all the other things that go along with a healthy lifestyle. You're giving the body all the tools it needs to repair and maintain the tissue integrity of the blood vessels. The blood vessel has three layers, the intima, media, and the adventitia. All those areas will improve and strengthen if we have new stem cells going into there if we have the energy from the sun coming into the aorta. This will increase energy production and function, a nitric oxide release. All those things are all important.

I would agree with you, if you take any health parameter, even coronary

artery disease, the body will start to clear out all the arterial disease. Let me say one more thing. We know intermittent fasting improves HDL numbers and HDL functionality. When you have more HDLs and you have more HDL function, it goes after all of the excess cholesterol in the macrophage, inside the blood vessels, clears it all out and will reverse coronary artery disease.

Dr. Jockers: Powerful stuff. Really, really fascinating. Dr. Wolfson, how do you personally implement intermittent fasting?

Dr. Wolfson: I love the idea of once a week, 36-hour fast. That is my personal favorite and how I do it. I've done some extended juice fasts. I've done seven-day juice fasts. I think anybody who comes out of it, they feel amazing when they do it.

Once again, we all tend to fall back into some bad habits and you need another fast to break you out of the bad habits. I love the 36-hour. The last meal is a healthy meal on Saturday night, then just drinking water all day long and relax. I love the idea of getting a massage on a Sunday afternoon. We can have someone come to the house or I go somewhere, just to relax for 60 to 90 minutes. I drink a lot of water.

One of my favorites is Pellegrino water. Pellegrino water is very high in sulfur. Sulfur leads to glutathione production and acts as a detoxifier. The idea is high-quality water throughout the day. Then waking up Monday morning and I have either a fresh greens juice or a reconstituted powder. Maybe after that have a handful of nuts and seeds or an avocado. It's really just a great strategy. It's super easy to do. Anybody can do it.

You talk about people on pharmaceuticals and different supplements. If you're on a bunch of pharmaceuticals, talk with your medical doctor to help them guide you through it. People who are on diabetes drugs, their blood sugar is going to drop, certainly if they are on insulin. You'll want someone to guide you through that. There are some great guides in your area. Either a doctor of chiropractic that practices holistically, a naturopathic doctor, a holistic MD or DO. Find your guide to get you to health and wellness. The conventional MD will just lead to unhealth, death, and destruction.

Dr. Jockers: Totally. If someone's out there who fears fasting, what would you say to help encourage them to get started?

Dr. Wolfson: Start slow. Maybe it's skipping a meal. My favorite meal to skip would be dinner. I think the literature supports the early feeding mentality. You wake up and your biggest meal is breakfast, then have a reasonable lunch and then skip dinner. This leads to an 18-hour fast. A lot of people do that on a daily basis. They have a big breakfast, a

sensible lunch and then they're done. They are eating in the six-hour window. This leads to tremendous results.

How many people do we know who skip breakfast or have a high-carb breakfast and the average lunch, then a massive dinner? After you have your ice cream, you go to sleep. That's the cycle everyone is in. My preference is to skip dinner. That's one way people can get into it, just start off by skipping that one meal, staying well hydrated, trying to stay relaxed, keep your mind busy, and know that you can do it. Millions of people have done this for years and years and years. You can do it. You can do it.

Dr. Jockers: Absolutely. I love that. The reason why we all exist right now is because our ancestors had to do it. They paved the way and helped our body to have the genetic potential to do this. We don't have to fear it. Just prepare ourselves. Like you said, prepare our minds, have a good strategy as we go about it, then just get started and start to experience it. Dr. Wolfson, this has an awesome interview. Where can people find out more about you?

Dr. Wolfson: Our website, Dr. Heather and I, is thedrswolfson.com and doctors is abbreviated drs, the drswolfson.com. We're also on Facebook and other social media. My book is available on my website. I would love for anyone to purchase the book on my website as opposed to Amazon. Amazon has enough money, I think. Come to my website and get the book from me. You're welcome to do that.

David, I so appreciate being on another one of your summits. I get such great feedback from people that listen to your summits, your content and I'm excited to a part of the health revolution. I really do appreciate you having me on.

Dr. Jockers: Well, thanks so much, Dr. Wolfson. It's really an honor. You have absolutely been one of my best guests, on the Keto Edge Summit as well as the Fasting Transformation Summit. I love having conversations with you. I love the science you go into, but also the practical applications. You really keep it simple and realize this is an ancestral way of life. I would highly encourage anybody that is out there to purchase his book, *The Paleo Cardiologist*, right?

Dr. Wolfson: Yes, *The Paleo Cardiologist*, *The Natural Way to Heart Health*. No matter what type of diet you follow, what I say in there is to eat organically. If you are a vegan, a keto, or paleo, eat organically. Even if you want organic cookies, cupcakes and ice cream. Any vice you have, coffee or alcohol it's out there so just get organically. My book is all about 17 chapters, *The Natural Way to Heart Health*. That's what it's all about.

Dr. Jockers: Absolutely. I would highly encourage it. Thanks so much for being on with us, Dr. Wolfson. For all the listeners out there, I want to remind you of this, fasting really unlocks the dormant healing potential within us. It's safe. It's powerful. It just might transform your life. Go ahead and get started. We'll see you soon. Be blessed.

Impact of Fasting on Chronic Inflammation

Guest: Dr. Cheryl Burdette

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. And I'm your host, Dr. David Jockers.

And in today's presentation, we're going to be talking about the impact of fasting on chronic inflammation. We know inflammation is a huge buzzword out there. I'm sure you've heard of it. And we know inflammation is the underlying marker that we find with every single degenerative disease. So we're talking about degenerative diseases that affect the brain like Alzheimer's, dementia, Parkinson's. We're talking about autoimmune conditions. We're talking about metabolic issues like being overweight or obese, heart disease, diabetes, cancer.

And so I brought on one of the leading experts in the area of inflammation. This is Dr. Cheryl Burdette. So she can really uncover what inflammation is, what sort of things impact our levels of inflammation, what causes inflammation. And we're also going to talk about how fasting can be a great strategy to use to downregulate inflammation. And we're going to talk about some key supplements that you can use to also help modulate and balance out your inflammatory levels.

And so Dr. Burdette is a doctor of naturopathy. She got her degree from Bastyr University in 2001. And she has been doing a lot of work in the research field as well as with big organizations that are involved in natural health and natural medicine. She has a private practice in Progressive Medical Center, one of the largest integrative medical clinics

in the southeast.

She has been a director of the only naturopathic residency program in the U.S. that's trained in functional medicine and nutritional biochemistry. She serves on an IRB board and reviews studies related to complementary and alternative therapies.

Dr. Burdette is one of the authors of the book *Laboratory Evaluations in Molecular Medicine* and has published in many journals including *The Alternative Medicine Review* and *Clinical Chemistry*.

She is often a sought-out speaker and is invited yearly to present at Grand Rounds at all the naturopathic medical schools in the country. She has been a member of the board of advisors for a company called Xymogen, one of the largest professional supplement companies who is also a sponsor of this summit. And she has been working with them since 2009.

She is also a president and education director of Dunwoody Labs, a fantastic lab that really specializes in functional medicine labs. So I actually utilize them as well. So they have fantastic labs that really get to the root cause of chronic disease. And they measure inflammatory levels.

And so her marriage between clinical practice and laboratory oversight really gives her a unique perspective in evidence-based natural therapies. And so Dr. Burdette, quite an extensive résumé. So welcome to the Fasting Transformation Summit. And tell us your story and how you got going, how you got started with all this.

Dr. Cheryl Burdette: Yeah. Well, thank you so much for having me here because I think that one of the most powerful ways we can interact with patients is through diet and is through lifestyle inventions. And the more we can bring an awareness to that, I think the more people will help. So thank you for making this summit available.

My path was a bit academic. So rolling through college, doing my undergraduate work, and double majoring in both premed as well as psychology. And somewhere along the line, I thought, surely these disciplines must intersect somewhere. There must be some overlap between the brain and the rest of the body.

And so in that didactic coursework, one of my last classes in psychology was called "Biofeedback, Self-Regulation, and Meditation." And in this class, Dr. Traub, the professor, taught us that there were many inventions out there. There were many treatments out there that were well-researched, that were less invasive, and that worked on root cause of disease. But yet they were dismissed because they were more about

education, or they were more about rehabilitation. And a lot of these root cause treatments our medical system wasn't set up to deal with. You just really can't accomplish that in an average, 7-minute visit.

And so he really opened my mind to the idea that there are less invasive treatments out there. They're just not being utilized. So with him we did some research. And one of my research studies as an undergrad was in this area of biofeedback. And biofeedback is a procedure that allows you to see what you're doing inside the body but reflected on a device outside of you.

So we would take college students and attach electrodes to their fingers. And then we would tell them to take their body temperature up or down on command. And they would learn how to do this by seeing the feedback on the device. And they could take their body temperature up 3°, back down another 3°. They got a dollar for every degree they could move their temperature.

And so what you saw was that when people worked with mind-body connection that it was a very powerful tool. And they could teach themselves how to do this within a matter of weeks.

So while it might not be that clinically meaningful to adjust your body temperature, the idea is if we can engage that mind-body connection we can modulate blood pressure. We can control anxiety. And we can really do these things in much more of a root cause way than merely as symptomatic treatment.

So then that just led me on to think, "Well, what kind of medicine would address both sides of the coin here?" I went to paper college guides—I don't even think online resources existed yet—and went through the *Peterson's Guide*. And there was something called naturopathic medicine. I had no idea what that was. But I was also 20-some and a healthy dose of naiveté to go with my ambition. But I'm happy for that. And went on to naturopathic medical school. And from there, I have just enjoyed being an advocate for medicine that gets people well.

Dr. Jockers: That's awesome. And just talking about mind-body medicine, really so much of health is that mind-body connection. The most proven tool is the placebo effect.

Dr. Burdette: Yeah, very true.

Dr. Jockers: It seems to work every single time. It's this belief that whatever we're putting our faith in is going to help us move in the right direction. So biofeedback is such a powerful tool.

So let's jump into inflammation. It's such a hot topic. So if you can define

inflammation for us and talk about its impact in our body.

Dr. Burdette: Yeah, so when I think about inflammation, I think about this ongoing process in the body. I think about a low-grade fire that's brewing. And I think about kind of a stew that your genetics could be cooking in. And when you cook your genetic stew, that causes problems with proteins and mutations and other issues in the system.

And so essentially, inflammation is not a singular diagnosis. It's not depression. It's not ALS. It's not MS. It's not fatigue. That's a diagnosis. But inflammation is a process that can drive almost every diagnosis out there.

And so whether or not we're talking weight gain or depression or even multiple sclerosis, in a world where there's more inflammation, you will make that process worse. You will make that condition worse.

And so we have an inherent choice over how we're going to hold our genetics, how we're going to bathe our genetics, if you will. And we can either be cooking them in this ongoing stew of inflammation. Or we could be bathing them in a wash of nutrients and low-stress environment and being mindful of toxins and really keeping our genetics in a healthier place.

And to me, this is really the definitive part of integrative or functional medicine—we recognize that it's not just a diagnosis. But there's a process behind that diagnosis. And that allows us another way to intervene and another way to change.

And the good news about that is it turns out one of the strongest ways to create inflammation on Planet Earth is our own choice. Now, genetics are not our own choice. And there are many conditions, obviously, people do not choose to get. But we have to power to change our diets. And when we do that, that changes the inflammatory load. And that's a powerful tool to reduce that inflammation and help many conditions see improvement from that.

Dr. Jockers: Yeah, for sure. And so inflammation. Why does the body even produce inflammation? Because we hear inflammation in this really bad connotation. And of course, we're going to address why that is. But why does the body produce inflammation? I look at the body as an intelligent organism. So why would it create something like this? How does it serve us?

Dr. Burdette: Yeah, absolutely. So if we were having this conversation a couple hundred years ago, then I would be much more concerned with you dying from dysentery, an infectious disease, than I would be concerned with your risk of rheumatoid arthritis or your risk of

Alzheimer's because we didn't live as long. We were much more likely to die from infections. And therefore, because we would die, we were less likely to get chronic conditions. The good news is we live longer now. But that increases our chance for chronic conditions.

So the immune system evolved to be able to create this high level of inflammation. So when it was under attack by a bug or a virus or a parasite, we could hopefully make it through that.

However, fast forward the timeline. Plunk us down in about—oh, let's say 1940 where you begin to see a great escalation in autoimmune conditions. And even though in the 1970s we declare this war on cancer, you don't see a drop off in rates.

And so what began to happen is a change in our environment, an environment that's more inflammatory. And when that occurs, it confuses the immune system. Now, if you present the immune system with a food and a pesticide, for example—or let's say you live in a moldy house. So you're generally more inflamed from your environment and you get some type of low-grade infection, it's harder to fight that. So from a bug to a food, all the toxins and poor nutrition have created a world where our immune system is overburdened but also easily confused by what it sees and feels it's under attack.

So now, rather than creating inflammation to this bacteria or this virus that might kill us, we're creating inflammation to pesticides. We're creating inflammation to lead or exhaust in the air that we breathe. And so we're creating inflammation to all of these things that are a normal part of our environment, meaning that immune system has gone haywire, much more inflammation. And that inflammation, while it's great at damaging bugs, can also damage us. It damages our tissue. It damages the vessel. It damages the brain. And so it's a way that our organs or our genetics begin to fall under attack.

Dr. Jockers: Yeah, really fascinating. So the same system that the body created to help us survive, because really chronic infections have killed more people in the history of mankind than probably anything else.

Dr. Burdette: Absolutely.

Dr. Jockers: So it has helped us be here right now. But it's actually now backfiring on us because we're not able to control it and keep it. Basically, it's like a fire in your house. If the fire is controlled in the fireplace, it's great. Everybody enjoys it. It warms up the house. It provides a unique element to the home. However, when we start pouring gasoline on that and the fire starts going up the walls, now it becomes a major problem.

And so what are the things people are doing, the major factors that are taking place now (you talked about pesticides, different things like that) that are driving up chronic inflammation like gasoline on that fire?

Dr. Burdette: Well, I think diet is right front and center when we talk about gasoline being dumped on the fire, creating that inflammation load. And I recognize when I say that that also our diet, our foods, are also more contaminated with certain toxins like glyphosate, a major pesticide that gets used.

And the data is strong at this point to say that it does a number of things to us. First of all, when my immune system sees food plus pesticide, it says, "That's weird. I should attack that." So it's a major reason for some of this immune confusion.

Beyond that, it begins to kill off those pesticides and foods with fewer nutrients in them as well, foods with less healthy flora surrounded with them, foods that are stripped of a lot of what they used to give us. That combination means less nutrition in our body. That combination means a better potential to damage the gut lining. And the gut lining is that area from your mouth all the way down. That includes the stomach and the small intestine and the large intestine.

But within that gut is held 85% of our immune system. This is the place where we decide. Are we tolerant, or are we inflamed? Are we going to gain weight from this food? Or are we going to drive the metabolism from this food? And so we've really wrecked the interface there. The foods that we eat, the way they're treated with pesticides changes how we interact with our external environment.

And so what we see—and I like to keep in mind the gut is the size of a tennis court. So when you think about that size, that's an enormous opportunity. If you're rubbing up against your tennis court in a difficult way, that's an enormous opportunity to create inflammation or either to create immune tolerance. And we've really damaged that interface so now we're more reactive to many things.

Not only that damage, but one that damage occurs, that gut lining becomes permeable or leaky. And now bugs, little bits of bacteria, or bits of food that shouldn't come in come into our body, inflame our immune system. And we get back to the idea that diet is front and central in terms of controlling this inflammatory load.

Dr. Jockers: Yeah, for sure. And so we look at basically we want to protect our bloodstream. And we know that intestinal lining is only one cell whereas our skin—I don't know if you know—but our skin is, I think, seven layers, something like that. So we can all see a cut on the outside. And we can see what happens. We clot it. There's a whole inflammatory

process that takes place. It aggregates all these white blood cells. We end up creating a scar.

It's kind of the same thing that's happening our gut on a consistent basis when we're eating these sorts of irritating foods and when we've got a stressful lifestyle. We just don't necessarily feel that.

And so why is the gut only one cell whereas our skin is multiple cell layers thick? Why is that?

Dr. Burdette: Well, in theory, we would like to have good transfusion of nutrients that we eat into the body as quickly as possible. And so evolutionarily, we're set up to do that. But now we're bombarding our system with not just food and nutrients but pesticides and toxins and low nutrition as well. So it's a very vulnerable part of our body, like you said. Those GI cells, those gut cells have to turn over every three days. So they require a lot of energy to do that. The mitochondria is that powerhouse of the cell that helps to make energy. And so it's a very energy-dependent process.

Now, not even allergies, just a high carbohydrate, sugary diet, what we would call glycation, that is enough to make the gut permeable. It damages what are called tight junctions, the Lincoln Logs, the glue between the cells. And when those tight junctions get damaged by sugar, boom! They open up. And now our immune system is exposed to so much it wasn't exposed to previously. So the diet has really tipped us in terms of this inflammatory potential.

Dr. Jockers: Yeah, for sure. And our ancestors, that food was scarce at times. So it was whatever you ate couldn't just sit there in your intestine. It needed to get into the bloodstream. So you had some nutrition. So it's only that one cell. And just like you said, when we start consuming foods and toxins and things like that that inflame it, it breaks those junctions. And now we get these large particles seeping in there. The immune system goes haywire.

And so what are some of the foods that we should be eating when we are eating basically to help our gut, help strengthen our gut, help reduce inflammation? What are the foods that we should be staying away from?

Dr. Burdette: Yeah, so first of all, eat less is probably generally true for the standard American diet. And you make a good point when you mention that previously when we would be hunting, we would go longer periods in between in terms of having those calories. There was no refrigerator to go put the buffalo into. So you ate. And then there was a pause, or what we might liken to intermittent fasting.

And so those pauses are really critical. So before we even get into the

foods that you eat, how you should eat is important as well. In today's world, people eat all the time. In fact, many times they're instructed. "Every two to three hours, you should be putting more calories in. And that's good for you metabolism."

I think that that are rare cases or some subsets of the population that need that diet short term. I think that that's telling them more about how they're adrenals are and that they're probably adrenally fatigued because adrenals should pull your blood sugar back up into normal range. They should be able to keep us feeling good for a longer period of time. So yes, there are some people who will do well with eating every two to three hours. But it's a sign they're probably more hypoglycemic. And that can be caused by adrenal fatigue. So there's something else that needs to be fixed.

For the rest of us, eating and not eating all the time is important. Think about if you ran your car all the time. It's going to give up much more quickly. But those breaks where you do tune-ups and where you fix things are critical to the longevity.

The same is true of our GI tract, of the gut. If they have to reproduce those cells every three days, then having breaks in between, away from food, is really important to be able to have that repair, to be able to allow the mitochondria (the powerhouse of the cells) to make what it needs.

So first of all, we've got to make sure that we're not feeding the face all the time and that we're giving the GI tract a chance to rest.

Dr. Jockers: Yeah, [inaudible], too.

Dr. Burdette: And you're quite an expert in this area. You're somebody who has really helped us change how we think about this because it is true. If you talk to most docs, maybe even five years or certainly a decade ago, they would tell you the best thing for your metabolism is to eat every two to three hours. Well, we're learning that nutritional advice just isn't accurate. The body needs a break. And it needs to repair.

Dr. Jockers: Yeah, absolutely. I discovered it just in my own pain-to-purpose story on my own while I was in graduate school learning how I should be eating six meals a day. I realized I don't feel good when I do that. Yeah, so that's how it started. But now the research is coming out talking about all the benefits of fasting. We'll come back to the food. Have you seen anything in the literature on fasting and how it impacts the inflammazone, SERT-3, some of the other different genetic pathways associated with inflammation?

Dr. Burdette: Absolutely. So your alternative, basically the body will

prefer a couple types of fuel. And so the fuel that it can use most preferentially is either glucose or sugar or ketone bodies which comes predominantly from fat tissue. And so when we've restricted carbohydrates, when we've restricted sugar, this is the time that the body will move into alternative fuel to make those ketones.

And we used to think of ketones as maybe even being secondary to the brain to glucose. But what we're learning is that couldn't be further from the truth. The brain loves ketones. The brain uses them efficiently. The brain uses ketones efficiently, not only in the brain but other places in the body as well. And so I can imagine going through grad school. You're eating every two to three hours. You're spiking a little bit of insulin with that. Even with healthy food choices, it's easy to get there. You think, "I'm having some carrots with hummus." And even that could be enough carbohydrate to kick you out of ketosis.

Dr. Jockers: For sure.

Dr. Burdette: And now that preferred brain fuel, many people will talk about when they are using more ketones as a source of fuel, they can think better. They feel like they think faster. And that's because evolutionarily we are wired to do that. As you began to need to find the next buffalo, the next berry, the next sustenance, it probably meant that your blood sugar was lowering. And so the body says, "I've got to stay alive." Makes these ketones. And those ketones really click on our brain. So we're able to find the buffalo. We're able to find the bear. We're able to find the berry. We're able to stay alive.

So the more we can utilize these ketones, the more our brain works better. And those ketones, part of why that happens is because they address that process. Not a diagnosis again, not per se depression, no per se weight loss although they're absolutely helpful. Getting into ketosis is absolutely helpful in both those examples but because of reducing that process of inflammation.

So one of the things we know is when you eat sugar you produce insulin. When you produce insulin, that sends a signal to your liver. It tells you to make more inflammatory fats, to make more LDL, to make more triglycerides. And things like triglycerides directly increase something called NF-kappa B. And that's a big upstream pathway that turns on lots of inflammation throughout the body.

So we know that's one of the things that happens in terms of ketones. And one of the ways that, if we can move away from insulin and move into ketosis, will reduce the inflammatory load.

Another thing that we know about the contrast between using sugar as fuel and using ketones as fuel is the ketones make much less reactive

oxygen species. And that's just a fancy way of saying free radicals. We all know free radicals are bad for us. They damage our skin. They make us age. They damage our DNA. They set us up for cancerous change. Those free radicals are what age us from the inside out, from the outside in. They age our cells. They cause the cell to make less energy. The cell wears down. The organ wears down. We wear down.

Ketones have a little special magic to them. They move right into the powerhouse of the cell, that mitochondria. And they help us. They build a little bridge between parts of the pathway, something called succinate and fumarate.

But that bridge that they build helps you to make more of something called ubiquinone. And ubiquinone comes from the word ubiquitous. Every cell needs it.

Or another way our audience might be more familiar with ubiquinone is knowing it as CoQ-10. Well, that's a nutrient probably you've read about that helps with energy and helps prevent Alzheimer's and helps prevent heart disease. Why? Because it helps us make cellular energy. And ketones come in right at that spot and help us make our own CoQ-10, our own ubiquinone, keeping the cell moving efficiently. And the more efficiently the cell moves, the longer it lives, the longer the organ lives, the longer we live.

So there are a number of identified ways by which ketones reduce inflammation in the body. And that's really just the tip of the iceberg. So again, it's very mechanistically driven. And the more we understand it, the more hopefully we'll pull it in as a therapeutic tool because where other medications have failed in terms of seizure control, something like a ketotic diet has had success.

If I go to the PubMed where the peer-reviewed medical research is in terms of things like a brain cancer, a glioblastoma, the research says that standard of care is less effective than a ketogenic diet. So it's back to what my professor was teaching way back a number of years ago that there are less invasive, more effective therapies. But they're just not utilized and harnessed because they're more about education. They're more about doctor-patient relationship. And the system is not set up to do that.

Dr. Jockers: Yeah, absolutely. That was just a powerful, powerful explanation of what ketones are doing in our body and how they're creating cellular energy. So let's talk about some of the best foods for helping heal the gut. And let's definitely go over some of the foods that spike insulin, restrict our ability to produce ketones and create more inflammation in the gut and then also foods that are going to help support us.

Dr. Burdette: Yeah, so patients or people, when we talk about what we are most afraid of in terms of health conditions, the things that you see—even though heart disease is the most common, that's not what tops the list. You tend to see cancer and Alzheimer's disease. And then you see cardiovascular disease. Great news! Ketogenic diet helps us to address all of those.

And so foods that we want to utilize. First of all, less food, fewer calories. And that's a big stumbling for people. We're moving into holiday season. And it can be natural to want to overindulge. And we have patterns. We come home, maybe stress at work or stress with the family. Or we're just relaxing. And so it's a comfortable time to eat and to eat more calories than we should.

So one of the nice things about being in ketosis or ketones bodies themselves is that they make us less hungry. It makes this achievable. Every single one of us has thought, "I should reduce my calories. I should be better about this." And had a failure along the way. And that's because, simply put, you get hungry. And we're driven to go look for calories. So when we have ketones in our system, we are less hungry.

Some foods that help us with that. First of all, you can take exogenous ketones. But we'll talk more about that. But some foods that help us with that—coconut oil is a great go-to. Those medium chain triglycerides are fundamental in our ability to make more ketones. And so we get those from coconut oil. It's a great thing to start utilizing more of in the diet, whether we're talking your protein shake, a tablespoon in there in the morning, or we're talking about sautéing some vegetables. Giving it more substance, giving it more fat can really be useful in terms of helping the gut.

And so of course it goes without saying we need to get out sugary foods. We need to get rid of the sugar. We need to get rid of the white flour. If it's white, it probably needs to go. Those are going to be things that spike insulin. Those are going to be things that keep you from getting in ketosis.

While we know that it's a high fat diet, I never like to see the vegetables go. So still a nice, strong focus on green leafies, having spinach around to throw in some stews or throw in a shake. You've got to keep the phytonutrients dense. And then from there, what we're learning is that when you do that—this is moving into ketosis. Having a ketotic diet is one of the best ways to restore the healthy gut lining.

In fact, they're even saying that some of the data around seizures is not just because of the intake of fats. So when I think of seizures, I think of, where's this happening? It's happening in the brain. And the brain is 80% fat. So change the diet to better fats. Put better fats in the brain.

This must be how seizure control works from the diet. And it does in part. But what we're also learning is that diet changes flora in the gut. It produces something called acromancia. And that acromancia is being found to be part of the anti-seizure potential. But that same acromancia creates a thicker lining on your gut, creates this mucous lining that helps to protect the gut and buffer the gut, making sure that proteins don't come into the body that shouldn't, making sure that the gut lining is soothed and working well so nutrition moves into our system.

And so a lot of the benefits of those ketogenic foods like coconut oil; like good, healthy nuts in the diet that are going to provide healthy fats to us; like avocado, a wonderful source of healthy fats. They're not only changing our fat biochemistry but changing our microbiome.

And that does a couple things for us. Changing that microbiome is one more way we reduce inflammation in the system. And changing those fats also changes the inflammatory load because it works on this little part of the cell called the peroxisome.

And we know the peroxisome is an anti-inflammatory pathway. This is why you've been taught about fish oils as being anti-inflammatory. This is why we've been taught about something like CLA helping metabolism because it's a fat that works on those peroxisomes.

Ketogenic diet, healthy fats also work on those peroxisomes to create anti-inflammatory fats in our body, anti-inflammatory prostaglandins which help our brain, help our weight, help our energy. And so when we can incorporate these foods into our diet, it's a very powerful tool to help us with most pathologies out there.

Dr. Jockers: Yeah, so good. So you're saying let's get these healthy fats in there, lots of vegetables. Let's keep the carbohydrates, so the grains, the sugars, things like that. Let's keep those out. They spike insulin. We obviously want to keep our insulin down and low. And let's eat less often. And so there is a big thing. If you eat once or twice a day as opposed to three to five times a day using the same amount of calories, you actually have 25 to 50% less insulin that's released when you do that.

Dr. Burdette: And there's a big study that just came out that really confirms the low carbohydrate hypothesis. Sometimes, we're taught that the data is back and forth. I think it's a little less back and forth than sometimes the media would like us to believe. Really, every time they set up a study to try to prove that high fat diets cause you to gain more fat—so that's the bias. They're trying to show that it does that. And when you have bias in a study, you influence it. So even with that influence, it has failed to show that. High fats diets are the diets that keep us from releasing insulin. Guess what else keeps us from releasing insulin? Not a

surprise to you. But ketones.

So I used to think, “Well, the only good ketone is the one we make because it must come from fat cells.” And so if you are making your own ketones, then you’re breaking down your own fat. And that’s the benefits.

But I was wrong. Yes, there’s benefit to that. Of course, that’s how we lose weight. But exogenous ketones help us mimic what our own ketone bodies do. So when I take some ketones, I’m going to be less hungry, first of all, because my body says, “Ah, food is scarce right now. Ah, we’re hunting. We’re gathering. Don’t disrupt the hunt and the gather with feeling more hungry.”

So those ketones send a signal to my brain to eat less. Then in addition to that, they send a signal to my pancreas to make less insulin. Well, remember. Insulin is the thing that’s causing that inflammation. Insulin is causing us to make more triglycerides to pack in more fat. That’s the signal. And so when that signal gets shut off, my pancreas doesn’t make insulin. My brain says I’m not hungry. This now becomes achievable.

And that’s the big thing. We all realize the benefit. But many times, doctors, clinicians will say, “But what patient is going to do that?” Well, then let’s give them the tools to help them do that!

Dr. Jockers: Yeah, absolutely. Exogenous ketones can be really, really helpful. I talk about that and, in a sense, how to create a fasting lifestyle. It can really help you get more adapted so it’s a tool you can use, especially in the beginning. And then also for performance, a lot of different factors. So that is great.

And let’s talk about some other supplements. What other supplements can people use to help reduce inflammation in their bodies? And we’ll talk about different brands as well that you really like and that you recommend.

Dr. Burdette: So yeah, I think, again this is so important. You can’t just treat the diagnosis. You’ve got to treat the process. And when we treat the process, that allows the diagnosis to move into our mission. So a huge part of that process is lowering the inflammatory load. And a big way we do that is through diet.

So in many ways, I begin to think we should step back a bit from being so focused on the pathology and really think more about how we optimize healthy pathways in the body. If sleep is a healthy pathway, if diet is a healthy pathway, if exercise is a healthy pathway, what things can we do that amplify the effect of those? Diet is probably our most important therapy. So how can we amplify what we do with diet?

And so I used to maybe have a little of this bias, too. Well, you can just control everything, all dietarily. And why should you need a crutch? Well, it's not, per se, a crutch but making a system more efficient.

So if I can take some—for example, KetonX is an exogenous ketone body that I like. It has a good flavor to it. It's very easy to take. So let's work by taking a scoop of that once or twice a day. When we do that, that will help to get the appetite down so the dietary goals are achievable.

The next thing is that—in some ways, some of our foods out there that have higher phytonutrients (maybe like a sweet potato or a carrot) are still a bit higher in carbohydrates. So how can we have our keto cake and eat it, too, so to speak? And so I like to also combine something called OptiFiber Lean. It's a konjac root.

And konjac root is a food. In fact, there's a Japanese noodle that's made completely from konjac root. And they've known this for years. They know that we can make this noodle from this konjac root. It doesn't spike blood sugar. It has no glycemic index. And it blocks some absorption of carbohydrates.

So when we're looking at longevity in Asian cultures, certainly we wouldn't point to one thing. There are many factors—green tea. And potentially being different in terms of sedentary lifestyle. But it's interesting that this konjac fiber is something that's been utilized as a food literally for hundreds of years in Asian culture. Well, we can utilize it as a powder, as a capsule. And one of those before you eat—

So carb cycling, too, is another thing that we might consider doing. There might be times when you want to pull in more sweet potatoes or carrots or things that have, again, nutrition to them. But you want to balance that carbohydrate load. Well, the OptiFiber Lean blocks the absorption of the carbohydrates without blocking absorption of the nutrients. So again, it's a way to have our cake and eat it, too.

Dr. Jockers: Yeah, absolutely. And you're talking basically these products they can get through Xymogen which is one of the sponsors here. And Xymogen sells to professionals. And yeah, let's go into a little bit more supplements. But first, can you differentiate? Because I know there are lots of different supplements out there on the market. People can go on Amazon and things like that. Why is it important to get professional grade supplements? And then we'll go back into some of the other supplements because I just want people to understand why you're recommending these certain products.

Dr. Burdette: Well, I know I'm preaching to the choir here because I know you reach for a similar thing in terms of making sure what you're bringing to a patient is a physician line and that the quality control is

there because, unfortunately, right now in the supplement market it's a bit of a buyer-beware market, meaning that we don't have the quality measures in place that you might with maybe the regulation around vehicles or the regulation around building codes so that roofs don't fall in on our heads. We just aren't scrutinizing as much on the supplemental front. So it is up to really the consumer and the physician with the patient or consumer to help make an educated choice.

So Xymogen is a physician line nutraceutical company. And what that means is that every batch of every ingredient is assayed or measured for what should be there and what shouldn't be there, meaning if you've read stories about people getting contaminated supplements that had lead in them or that had pesticides in them, there's a reality to that. If you have read articles about people buying supplements that are actually just sawdust—okay. Well, maybe that doesn't hurt you. But it's certainly not why you bought it in the first place.

So when you work with a physician line, you know that every batch is tested to make sure that it meets quality control standards. And this testing is not done by Xymogen. It is. But it's also done by independent, third party labs. And these third party assays are made available to the public at large. So you can always check their work.

For you and me, when we're working with patients, the worst thing, the last thing we want to do would be to give them something that would set them back. A huge tenant of our medicine is, "First, do no harm." If we're working with supplements that might not meet their label claims, we can't feel true in our steps in terms of offering that, "First, do no harm."

The second thing is probably like you as well. When we're working with a patient, what we want to see is we want to see them recover quickly and to feel better as fast as they can. We know that many times it's a process. And it takes time to do this. But that's what we're hoping for. If we're using something that doesn't meet label claim, if we're using something that's contaminated so it increases inflammatory rather than decreasing inflammation, we slow that patient down.

And so the more we can see a faster, better result, the more people feel well. The more they feel well, the more they're even able to minimize what they need to do through supplementation because the more they're able to shop for that ketogenic diet, the more they're able to go on that 30-minute walk every day that we're recommending that they do, the more they're able to partake in diet and lifestyle changes that really augment their wellness and augment their care. So quality supplementation is really critical in terms of patient wellness on so many levels.

Dr. Jockers: Yeah, I think that's so important. As a clinician, you've got

this intimate relationship with that patient. They're putting their trust in you. Absolutely have to make sure that you're giving them the best quality stuff. You need to make sure you're getting results. That's really what it's all about. And so you need a company that's going to come through and really be able to test their products. And that way, when you get that product, you know what's in there is in there. It's been clinically tested. And that it's going to get results for you. So I think that's so important.

And so practitioners out there can check out Xymogen. We've got their logo and landing page in our stuff.

Dr. Burdette: You've done a lot in terms of formulation yourself. You've done a lot in terms of working in this industry. And I bet you can attest to, even if you meet all of the quality, what if you're working with a ketone body that doesn't taste that great? How long does the patient actually utilize it? So even things that in some ways are more minimal like that, it's a big difference.

Dr. Jockers: Yeah! A big thing too with exogenous ketones is you have to make sure that they're actually raising up your ketones effectively. It's got to be tested. They shouldn't impact your blood sugar. If anything, they're going to lower it slightly. And so these things all need to be tested. I think it's just so important because so many people out there that are listening just go to Amazon and try to find something. But you just don't know the guarantee.

So it's a really good idea to find a trusted practitioner that you can be working with that typically has vetted out good products that will really help you because so many people have a supplement graveyard. All these different supplements they've tried just aren't getting results. They're all sitting there. And it's just very expensive and, like you were saying, can be harmful in some cases. I've heard stories of people using traditional Chinese medicine using different Chinese herbs and things like that only to find out that these things were contaminated with lead or whatever it was. It was never tested. So it is very, very important in our society today to find the right manufacturers and find a clinician or a practitioner of some type that you can be working with.

So with that said, you can continue on that. But let's also talk about some of the other supplements that you like for reducing inflammation in the body.

Dr. Burdette: So I think many of us are familiar with the idea of a functional food. And what that means is something that looks like a protein shake but often has much more therapy included in it. One that I like is something called OptiGHI. That's also from Xymogen. And the reason for that is that it's a nice, high quality protein. It also has

some medium chain triglycerides in there. But a gram of natural anti-inflammatories. So our botanicals, our phytonutrients are some of our best ways to reduce inflammation.

Many people are familiar with things like turmeric, the yellow spice that's in curries. And it's interesting because in India where more curry is consumed, on autopsy there's even a slight yellow tint to the brain tissue. So we know turmeric or the active compound in turmeric, curcuminoids, goes straight to the brain and reduces brain inflammation but body inflammation as well. So that's one of the ingredients that's in there.

But another thing that I like about OptiGHI is that the carbohydrates are low. So particularly the stevia and the sugar-free one you're getting 7 net grams of carbs in a serving of a shake. So you can get full with that.

But in addition to that, there's a very healthy dose of a mineral called vanadium. And vanadium is important to think about in our ketogenic strategies because the diet works extremely well. The diet works most of the time. But as you know, we can always have an outlier in medicine. We can have somebody who doesn't seem to respond as well. Or they're not quite dialed in in the same way.

So one issue that can happen for people is when they're first adjusting to moving into a ketogenic diet—so this is another reason exogenous ketones help because it smooths this transition. And it helps erase part of this problem. But part of that transition, the body feels it as stressful. "I'm changing fuel sources." And so there's a short term stress associated with that. Some people will call it a keto flu. And again, this is a great place. Our exogenous ketones build a bridge there.

But the way the liver interprets stress is to say, "Uh-oh. I'm under stress. I'd better make sugar." And the liver will go into some called gluconeogenesis (the production of making sugar). So there you are. You're working on your diet. You're trying to make this transition. But your body is saying, "Ah. I feel a stress." And so you're getting a bit of a pushback in terms of some of the sugar being made. And your weight loss is slowed down.

The vanadium in the OptiGHI decreases gluconeogenesis. So it's a great way to help say, "Okay. We know ketogenic works most of the time and works very well. But when there are exceptions, what are those exceptions. And let's just make sure that we have a comprehensive strategy to deal with road blocks, too.

Dr. Jockers: Yeah, and I always tell people chromium and vanadium. I see a lot of people deficient in both of those. And they both really work to help improve insulin sensitivity. And this is what we've been talking

about. Hey, if the less insulin we need in order to get the sugar into the cells, the sugar in our bloodstream, the better off we're going to be—the less activation of these inflammatory gene pathways we're going to have. So yeah, really, really key nutrients.

And you also talked about the fiber and how that can impact it. The exogenous ketones. Anything else that you want to talk about as far as supplements.

Dr. Burdette: Yeah, so I think that one more that I like to augment these pathways that a ketogenic diet turns on is some alpha lipoic acid. And the one from Xymogen is unique in that it is controlled release. And so you can get a much better dose because of that formulation than you can standardly. So most of the time in supplementation, we see 50 mg or 100 mg of alpha lipoic acid. Xymogen's is 600 mg but also controlled release. So it washes through the body over a longer period of time.

Alpha lipoic acid is like turning down the faucet on insulin. Again, it causes the pancreas to make less of it. And then makes the insulin receptors more sensitive. When that occurs, the body says, "I don't need more insulin." And so that's one more way we can decrease it.

One of the things that we know about a ketogenic diet is those ketones are excellent at turning on pathways in the cell that create energy. And they have fancy names like AMP-kinase. And they will help the muscle to utilize more glycogen, to utilize more fuel to create more energy. But what's interesting about that pathway that exercise turns on, ketones help there as well. And it inhibits a major pathway that gets turned on in cancer cell development.

So long and short, I'm saying this is one more way that exercise is good for us. Our exogenous ketones help us to mimic what that exercise does. And that alpha lipoic acid helps to amplify that as well.

And so when we start to put these things together, we start to chip away at the roadblocks, that "I'm hungry." Or "I crash." Or "I have cravings." And if we get a 10%, 15%, add another 20%, 25% improvement by putting these things in our arsenal, then it really makes the key therapy (the ketogenic diet) much more achievable.

And again, we're not really treating a pathology. We're treating that process, that inflammatory process. A great way to be inflamed besides a leaky gut is to be overweight. Fat cells make inflammation. And so until we've achieved our normal BMI, we haven't fully optimized our ability to lower that inflammatory load that makes us hurt, that makes our brain less clear, that makes us gain more weight. And so working with those interventions—the konjac fiber and the OptiGHI and the ALA and the exogenous ketones—is a really nice grouping to help us move along

the metabolic continuum in a way that shuts down those inflammatory pathways.

Dr. Jockers: Yeah, powerful information. Really, really good stuff, Dr. Burdette. And so any final words of inspiration? There are a lot of people out there who are checking this out. They're not sure about fasting, not sure about getting ketosis. What sort of inspiration can you provide for them here at the end?

Dr. Burdette: That your most powerful health tool is you. It's not a doc. It's not a prescription pad. It's not some place you have to go. It's not something that you're policy has to cover. It's the choices that we're making every day about diet. We eat probably at least two times a day. Many people more. And every time you eat, it's the opportunity to either increase inflammation or reduce inflammation. But ultimately, we are empowered to change our health much more than any prescription pad ever could. And that means that we can take control over these things. And everybody has the potential to reduce their inflammatory load.

Dr. Jockers: Well, that was wonderful! That was an absolutely fantastic interview! Thank you so much for joining us here. And it's just like Dr. Burdette said. The power to heal is within you. For many people, it just lies dormant because they haven't activated the right pathways. And she talked about that, activating these pathways, enhancing these pathways with nutrition, supplementation, different lifestyle strategies. And so fasting has the ability to really activate the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life.

So hopefully you guys enjoyed this interview. And if you have, consider owning the entire Fasting Transformation Summit for yourself. That way you get lifetime access to all these interviews, all the transcripts, the MP3s, everything that you need plus all the fantastic bonuses. If you haven't checked those out, definitely do.

And I find most people tell me this: that especially when they first get started with fasting, fasting is so much easier when they're able to listen to transformative and empowering information about fasting like this interview here. It can really help empower you and give you the momentum to carry through with a healing fast and really apply into maybe an intermittent fasting lifestyle and all the different strategies that we talk about. So if you would consider owning this, we would really be honored. And we'll see you on a future interview. Be blessed!

Mold, Your Brain, and Fasting

Guest: Bridgit Danner

Dr. Jockers: Hello, everybody and welcome to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. I'm your host, Dr. David Jockers. And in today's interview, we're going to talk to Bridgit Danner, and our title is; Mold, the Brain, and Fasting. So a little bit about Bridgit, she's been a licensed acupuncturist since 2004. And she's a certified functional diagnostic nutrition practitioner, and she's been doing that for the last five years. She ran a busy integrative medicine clinic for 10 years and she's done over 12,000 treatments in her career.

After losing everything to toxic mold, Bridgit now educates about toxins and how to detoxify with a functional health care approach through her online community at bridgitdanner.com. She also offers functional lab testing and practitioner grade supplements through her shop, thehormonedetoxshop.com. And so this interview is really good because we're going to dive into mold, toxic mold, what it is, what the symptoms of it are. And how you can use fasting to help your body detoxify, reduce inflammation, and get better; even if you're dealing with some sort of a chronic issue like toxic mold. So let's dive into this interview. Hey, welcome to the Fasting Summit, Bridgit. Really great to have you on and I'm really curious about your story of getting exposed to toxic mold. So why don't we start with you going through that?

Bridgit: Sure. So, probably like everybody's story with toxic mold is pretty long. So, I'll give you the abbreviated version. I think I was affected for many years in the home I was in and then it sort of hit this tipping

point where I was like, "I'm eating well, I'm going to bed on time. I'm like doing everything right," but I was getting worse. I got strep throat. I didn't recover. I was so tired. And I was like, "There's something else going on." Like, "What more can I do to be healthy?"

So eventually, luckily somebody asked me some questions about my home and if there had been any changes and we decided to test for mold in our home and ended up having it. Definitely made some mistakes in remediating. It was still in the home. I got a lot sicker but came through it. So that was in like 2016, so it's been some time now. I ended up moving to another state. We really went to some extremes to become healthy again, but it does happen.

And there's lots of ways to do it. I'm pretty into ways that we can access affordably, easily and fasting is potentially one of those ways, so you can get better. I didn't really know much about fasting when I was first going through this. It's funny, looking back, I was already like, eating well and doing all the things. I think that kind of kept me going for some years. But when I was really getting sick, and I don't think we had had the mold inspection yet, I did a like a month long fast with the Apex Energetics™ kit, which I had liked in the past and it just didn't do anything for me. I just felt still like total crap.

And we'll talk later about how you have to get out in the environment. But I think that fasting is potentially a tool I could have used because I needed something like beyond just like cleaning it up. So, later, like a couple years later, I got exposed to Jay Davidson's work, started doing coffee enemas. I would say that's when I started to maybe do a little bit of partial fasting or time restricted eating because I wouldn't eat around then and that felt really great, especially combined with an enema.

So then I sort of like got a little more open minded to it. And then actually, just this last year, sort of accidentally started fasting because I was going through a really stressful time and not hungry, and not eating. And I just noticed that during that time, I actually had amazing energy and mental clarity. And I think that that change of diet really gave me that. So it was a big light bulb for me. That wasn't the best circumstance that made me do that but those habits actually really, like made me a new weight set point. My brain was working better, everything was great. So since then, I've been doing more of it, doing more like partial fasts, looking into it more. I'm not as much of an expert as you but just trying to learn a little bit more about what's actually happening when we fast.

Dr. Jockers: For sure. It seems like you're going through the journey and really all of us have our own health journey. And so that's how I discovered fasting, was I just felt better doing intermittent fasting back when I had irritable bowel, and I just felt so much better. And it allowed

me to actually gain weight, which was surprising to me. And then you start to experiment, kind of like what you're doing. So, let's talk a little bit more about toxic mold. Let's kind of go into what that is and how common it is.

Bridgit: Yeah, so there's like many species of mold out in nature and whatnot. And not all mold is toxic to humans and animals but some is, and some of that grows on grains and food crops that we consume. And then it can grow in buildings too. So part of that is like our modern construction, but I think there's been incidents of it for like many years in history. I found like this biblical reference about like scraping mud off, you know, there's mold. Mold is a natural thing but when it's not in a natural competition, like in the forest or whatever, especially then, like toxic molds can overgrow.

And it tends to happen now with our environment of like drywall, which is basically a fiber and then there's like the plumbing leak or, like in our home, it was like the gutters weren't installed right and like the windows weren't installed right. So there were leaks that weren't really very obvious at all but they were happening inside the walls. So, many buildings are water damaged or have been. Anywhere from like 40 to 80%, depending what you look at. So most buildings have been affected by water.

If you think about probably your own home or places you've lived, you've seen it. It doesn't mean every time that you're going to get really sick or that there's toxic mold. And then, so there's many genes that affect our ability to detox. One is this HLA-DR gene that's kind of well-known with mold as the dreaded gene and about a quarter of us have it. However, there's actually like a bunch more genes than just that; that affect our ability to detox. Genes that like help us make glutathione, genes that help us like clear inflammatory compounds. So we're our genetics and then we're our epigenetics, and our health history. So it's not quite as simple is like, "These 25 are only going to get sick." It's just, what is all your genes? What's your health history? I definitely think you can not have the gene and get sick, but you may get a lot sicker potentially.

I had a mother and daughter, actually, who I tested, and they had already tested their HLA-DR. The mother was elderly and had the gene, the daughter was kind of middle aged and didn't have the gene. And their mold levels were quite different. Although the mother had been in the house like forever, like very consistently, where her daughter had come in and out. And the mother's levels were much higher than the daughter's. So that's just one instance. But I thought it was interesting that like, maybe your levels will be higher if you do have the gene that doesn't help you tag and clear mold very well.

Dr. Jockers: Yeah, so toxic mold exposure is not healthy for anybody,

but some people are going to react a lot worse than others. And then obviously, our genetics and our stress load and things like that are all the factors that play into that. What are some of the symptoms? Like, what did you experience? And what are the typical symptoms that people will experience if they are exposed to mold and they're having a poor reaction?

Bridgit: So, for me, I think when things started... and I also think like things that are already imbalances for you are going to be often the ones that play up when you have a new... like your chiropractor, like often, like you get hit by a car, it's like, "Well, you already were weak," as though you were going to get hurt. So for me, it was like a lot of immune weakness, getting sick often. I got pinkeye. I got Epstein Barr virus. I was just like always getting something. But for a lot of people, fatigue is the number one thing. When I was at my sickest that was a hundred percent my number one thing, just deep, deep fatigue. Like just everything feels like you're just in mud.

Poor thinking, like foggy thinking; poor recall, that's really common. Digestive issues are pretty much inevitable. This is the way that it just regulates the brain and immunity, and inflammation. The digestive system is pretty much always going to be off. Insomnia could happen, headaches, muscle pain, changes in mood, changes in hormones, like irregular cycles, low libido. Like, loss of muscle mass could happen. Changes in appetite, a little bit like... well, you talked about IBS and the benefits of fasting. But you know, you could be not gaining weight or you could also be gaining a lot of weight. It can kind of go both ways. So, changes in appetite or weight.

Skin issues, some people feel it comes out through the skin. Respiratory issues, you'd think it would be all respiratory issues but it's not. Kids, it's often ADD, it'll show up as ADD in kids. And frequent urination, which makes you lose electrolytes; that we can talk about later. So pretty varied and why it's hard to tell. And frankly, I was a practitioner and in the field and like, nobody was really suggesting to me that I had mold, for many years.

Dr. Jockers: So, what are some questions that you'll ask patients to try to tease out if mold is an issue, before you do any testing?

Bridgit: I actually always recommend to start testing your spaces before your body. It's possible that you were in a former space and you still have it or it's only from food and you have it; but more often I would say that there is a current place they are suspicious of. Or upon questioning, we find that there's something going on. So yes, like, "Do you know that there's some water damage in the home?" "Are you seeing film or mold?" Like, "In your basement, do you smell a musty smell?" "Can you see visible mold?"

Maybe you go to a place like your work and you just feel like crap as soon as you get in there; that could be another sign. You start having nosebleeds when you're in a certain place. So yeah, I mostly suggest that... because that's actually the main thing to fix, so to speak, when you do have mold. Is like, you need to get out or fix that environment; usually just get out. So I do kind of question more about, like the home or the school can be an issue as well. I have a client right now who, she's a janitor at a school, an old school, and you can buy these pretty cheap plates to test for mold and I'm like, "Just go put them in a few places." Yeah, "They're not helping you. So you have to help yourself, go do some testing."

Dr. Jockers: Yeah, let's talk about testing. Like, you want to test your home, you can also test your body. So, what are some of the tests you look out for?

Bridgit: So, when we test the body, we do a urine test. I think that there's a blood test too. This is not blood tests you get at your doctor's office, by the way, unfortunately, unless you have a health savings card, really nothing is going to be paid for. So we do a urine testing. We're really happy with it.

Dr. Jockers: Is that the Great Plains mycotoxin test?

Bridgit: Yes, that's the one we do. And then it goes great with our organic acids test. And then sometimes we run a chemicals test too, just to get an overall picture. In the home, you can do like a mold plate, like I said, there's a test called the ERMI test that will give you kind of like a score. There's a mycotoxin dust test or then you can just hire an inspector who's taking samples and testing through their own methods.

Dr. Jockers: Okay, yes, makes sense. Now, let's talk about, you know, how mold will affect the brain because I know that that's kind of the title of this talk. So what are the effects of mold on the brain? And then we'll get into fasting and how that can be used.

Bridgit: Lots of effects on the brain. You know, the brain is very fatty, and mold is lipophilic, it's kind of attracted to fat. Mold is a toxin, just like, I don't know, nerve gas or like, you know, you think of other things that are really like dangerous. It's very dangerous, even though it's invisible. It's toxic to every cell in your body. Any organ can be affected. It can go pass through the cell wall, affect the nucleus; affect the DNA. So imagine that happening in your brain. So it can generally make your blood brain barrier leaky and pass through to the brain. Now you have this toxin in your brain.

It can kill neurons, it can damage and destroy glial cells or supportive cells, as well, of the brain. When I finally learned this years later, I was

like, "Oh my gosh, this explains so much." It's really affecting your mental ability but also it's the command center of everything else. That's kind of why it affects your digestion. That's one reason why it affects your hormones too, your brain is inflamed. Now your hypothalamus pituitary is inflamed.

Having really low hormone levels, I think is quite typical in these situations. Yeah, so, you know, it also seems to help be a good conduit for autoimmunity because it's such a disregulator. So, I see Hashimoto's a lot. And you could potentially develop autoimmunity in the brain as well. I'm not as much of an expert on that. So yeah, lots of ways. Some good, some reversible; hopefully most of them reversible, if you catch it in time.

Dr. Jockers: Yeah, absolutely. And one of the cool things about fasting is, when you fast, particularly like doing a 24 hour fast once a week, you actually shut down what's called the NLRP3 neuro inflammasome. And so I'm sure mold is one of the things that really activates that inflammasome, which basically amplifies inflammation in the brain. So just like you were talking about, just this massive inflammation. And so, fasting can be used, along with a lot of other strategies to help reduce that inflammation.

Bridgit: Yeah, I just wrote that down. I want to look into that.

Dr. Jockers: Yeah, there's some good studies out there on the NLRP3 neuro inflammasome. So, when we think about inflammation, we think about it being like very localized, like a tissue injury, but this thing just amplifies it throughout the brain, throughout whole regions of the brain. So it's good to be able to...

Bridgit: Yeah. I read also about BDNF, which I'm sure is mentioned here.

Dr. Jockers: Maybe let's talk about that.

Bridgit: Yeah, I mean, you can tell me more because it seems like a miracle to me, when I'm reading about it. That it can help...

Dr. Jockers: BDNF is awesome.

Bridgit: Yeah, it can help grow neurons. Tell me more about that.

Dr. Jockers: Yeah, so brain derived neurotrophic factor. And so like, when we move, things like that, it's basically what creates plasticity in the brain, where we're growing new neurons and connecting different neurons, and things like that. And yeah, a lot of things, like exercise is a great, great thing for BDNF. If you've got chronic inflammation in the brain, you're going to be depleted in BDNF. So, getting that BDNF up is

going to help your body heal and regenerate. And fasting is a great way to help support BDNF levels. So I'm glad you brought that up.

Bridgit: That's awesome. Yeah, just that flexibility. When I was really sick, I had a practitioner who was like, "You need to exercise," and I was like, "That's not happening." But I started, little by little and then you can do more. So I really do advocate starting where you're at and increasing at the rate you can, doing a variety. Yeah, these things sound so simple but they do help, especially when you're in this like really devastating state of fatigue, some people aren't working. You know, just get moving, do new things; get your brain stimulated.

Dr. Jockers: Yeah, absolutely. And that also goes into fasting too because when you're sick with toxic mold, your adrenals are shot, you've got this massive hormone dysregulation. So fasting isn't as easy as, "Okay, I'll just fast." And let's talk about some of the challenges that a toxic mold patient may have with fasting.

Bridgit: So your brain uses a lot of glucose and it uses way more when you have a damaged, inflamed brain. So when I was at my very sickest, you will know all about this, David, I was running my first big summit. I was doing all the interviews, I was getting ready. I was living at my parents' house because I couldn't live in my house. And I just was like, thank God I had hired someone to replace me. So I was working from home but I was so tired and so mentally out of it, and I really was relying more on carbs and caffeine to get me through.

And I knew better. That's not how I used to eat but I would just so like... I needed fuel. And that's where I went. If I'd known maybe some of this information, I could have made other choices, but you're going to tend to crave carbs or crave what's going to get you through the day. And it's kind of dangerous because now you've got like, insulin resistance maybe and your brain isn't working as well. Or you're gaining weight, you're feeling bad about it. So it's like finding that balance with where you're at in your own illness.

Can you maybe start with just making sure you do eat higher quality foods and don't rely on such processed things? Or stretching out mealtimes, like you talk about. Make sure you're really hydrating between, getting electrolytes. Doing maybe just a 12 hour fasting window instead of something that's really challenging for you. And you do have to kind of fuel into that. Dr. Kharrazian, who I studied with last year, he kind of recommends like whole foods, paleo, then potentially paleo autoimmune, that's really actually my favorite diet.

But then like going into keto and getting used to burning fats that way, and then getting into fasting. So that's what he recommends. I think we all need to kind of experiment for ourselves. Like I mentioned, the coffee

enemas, I love those for mold. And you kind of like aren't eating then, so that could be a way to ease into it because it also gives you energy. Those are few ideas. If you have any to piggyback, you're welcome to.

Dr. Jockers: Well I think that's a great outline right there. So, you want to start with making kind of the general diet changes, getting rid of sugars, excess starches. Getting rid of bad fats, commercialized animal products, things like that and trying to go organic; trying to reduce your chemical load and increase your nutrient levels. And I always tell people to start with that simple facet, 12 hour overnight. So it's like just having the discipline to say, "Okay, seven o'clock, I'm cutting it off," whatever it is; that's usually a good time to cut it off. And then you're not eating anything until at least 7:00 am the next morning, nothing with calories.

You wake up in the morning and you start your day with water, drinking eight to 16 ounces of water before you think about eating anything. And oftentimes, that will actually suppress your appetite. And you'll be able to push that fast out just a little bit longer, maybe up to that 14 hour window, something along those lines. And just really trying to be intuitive and if you're constantly having cravings, usually there's some metabolic derangement there.

And hydration can really help and electrolytes, things like you talked about there. Those are really important. And eating nutrient dense foods. So, I think all those things are great. But you've been talking about coffee enemas, none of our speakers have really gone into that. So, you're somebody that loves doing them. I've done them in the past, I never loved them. But since you love them, why don't you share some of the benefits?

Bridgit: I actually did one today and it's a Thursday. You know, I've never been a coffee drinker either. Like I don't tolerate that. And I get that question a lot, too. Yeah, you get a little caffeine in you, but it's not really the point. So if you can't take any stimulation, maybe it's not great for you but it's just like a nice little stimulation, while at the same time you're getting this massive dose of glutathione and cleaning your whole bloodstream.

So there's a compound in the coffee and I can't remember what it's called right now. But the idea is not to like help you have a bowel movement or anything. The idea is to get this coffee close to your liver, getting into the blood supply for the liver. And whatever this component is in the coffee, sorry, I'm forgetting it at the moment, it helps stimulate...

Dr. Jockers: Caffeic acid or chlorogenic acid?

Bridgit: That might be it. We'll just say something acid. Yeah, and we do a light roast coffee to not damage that compound. So that helps

stimulate glutathione production and it's my favorite way. There's lots of glutathione supplements out there and I do recommend them but that is my favorite way to get glutathione. And yeah, it just kind of, like energizes you. And if you want to kind of incorporate that into a fasting schedule, I think it's possible.

Dr. Jockers: Yeah. And it also dilates the bile ducts and helps the bile ducts just kind of empty out and a lot of people have issues with that. You know, basically bile ducts that are just blocked up with really toxic, sludgy bile, so it's a way of helping thin that out.

Bridgit: Another thing I found out it can help for, from Dr. Kharrazian, is stimulating your vagal nerve. So if that's been shut down from a brain injury or from mold, or whatever, and you're one of those people who has to take magnesium or something every day to have a bowel movement, making the coffee potentially stronger, to find the right level, and then holding it is going to like challenge your body and stimulate that vagal nerve. So that's another kind of cool benefit.

Dr. Jockers: Yeah and that's good because that vagal nerve is part of your parasympathetic, rest and heal, nervous system. And so many people, especially if you're chronically ill or have toxic mold, you're typically in fight or flight. So it's going to help create balance there as well.

Bridgit: That's a great point. And then while the enema is a little stimulating, I actually find like taking that extra time to do it is like pretty relaxing. So, just kind of like it's some time for self-care.

Dr. Jockers: Yeah, yeah, absolutely. Well, how about partial fasting too? I would think that that could be really helpful, like bone broth fast or green juice, juicing fast, or something along those lines. Or I don't know if you're familiar with like a fasting mimicking diet, those are all examples of partial fast free eating, just less calories than normal. Typically, like under 40% of your normal calorie load for five, seven days or so. A lot of good research on that. Have you tried that with any of your clients?

Bridgit: Yeah, I have a mold group and I was like, shoot, I really should have, like, asked them before I go on with you, but I'm going to ask them afterwards. "How does it work for you? What have you tried?" I just interviewed Robyn Openshaw, who offers a three day partial fast kit. I would say pretty much the only fasting I've done has been partial fasting or intermittent fasting. So, she says stay 800 calories or below. They have a really clean kit. Its plant based and you're going to have five different little shakes or whatever, which, frankly, you could make your own; make up your own version of that.

So I don't know if it's just keeping the insulin under a certain level that

makes it qualify, but she says your body still feels it's fasting. Her kit is three days but you could certainly do longer. And it could be good for a person whose brain is still a little challenged because you're still, you know, you're not waiting like eight hours to eat. You could be more flexible. And she encourages you, like if you have your mini meal, and then you want another in an hour, it's okay. And I find that for my own body, that's kind of a good option because I think still, like my blood sugar is a little wonky. My brain is still a little needier and I like it to be. So I like having that option. And I think if you're sick and you're already kind of struggling to like add in something that's really challenging, it's maybe not a good idea on a lot of levels. But if you can have this mini partial, yeah, I found hers quite easy. And I think it's a great place to start.

Dr. Jockers: Well, there you go. So, like 800 calories. So the normal calorie load, especially for a woman, it's about 2,000 calories. So that's roughly 40% or less of the calorie load. What happens when the body is calorie restricted for multiple days, you start to have this pattern of autophagy. Where your body breaks down older, decaying cells and older decaying cellular organelles like mitochondria, you start breaking those down and rebuilding new mitochondria. And you can do this, you can amplify it through like a pure water fast but again, like you said, not everybody can handle that.

And for some people, it can be a lot more comfortable doing something like eating just small meals, kind of like you were talking about, consuming 800 calories or less. You could do it with bone broth. A lot of people will do bone broth fasts, which provide electrolytes; they provide amino acids; really good for the gut. And it's very easy, so it's already predigested. So it's like really easy on the system or green juices, or something along those lines. And really, Bridgit, you're the demographic that probably has the hardest time fasting and that is very lean women who've had chronic health issues, autoimmunity, or something like that in the past.

That's the toughest demographic to get to do an extended fast because you're already lean, you only have a certain amount of body fat. And once you hit a certain threshold, your body is going to really amplify that stress response. And so for someone like you, partial fasting probably is a better strategy, at least until you get your body healthier. Then you may be able to do a water fast at some point. But in general, partial fasting for women that are lean, that may have had a history or are suffering with toxic mold, chronic fatigue, autoimmunity, you know, issues like that, I definitely recommend doing some level of intermittent fasting.

We talked about like the 12 hours. And what I like to push people into is what we call crescendo fasting, where you do 12 to 14 hours on a daily basis. And then two days a week, non-consecutive days, you go up to a

16 hour fasting window and you eat your meals, an eight hour eating window during that week or during that day, I should say. So it'd be like a Monday and a Thursday. So it gives you some recovery days in between. And we don't jump right into that immediately but we'll work our way up to that. It's kind of like exercise.

You don't want to have too much exercise too quickly but you want to move in that direction. You want get your body moving and build a level of fitness. And then when you do something that's a little bit more stressful, like a stressful workout. You want to give yourself at least two full recovery days before you do it again. [Inaudible] to help and a lot of people get really good results when they find that they're getting their healing faster. And their energy goes up during the crescendo fasting. And then from time to time, doing some sort of like a partial fast for three to five days can really help.

Bridgit: Yeah, Robyn liked the three... it's like three days a month, do a partial. You know, I want to add a caveat because I just said I did a partial fast just great. I also told you I'm like four years from finding mold. That's a long time. So I haven't always... you know, actually, Robyn has also just like a vegan, like detox plan. It's just food based. And I tried to do that, I don't know, maybe a year, a year and a half ago and it was horrible for me. I couldn't handle it blood sugar wise, I was exhausted.

And then I started, I think, detoxing and having Herx [Herxheimer] reaction, like I had a major headache. I just had to stop the fast. So, take what I'm saying, it's a piece of cake because I have done time to get where I'm at now. Yeah, whatever it looks like for you to fast is totally great because that's where you're at right now. And if you push it too hard, where you're feeling worse, you're releasing more toxins than you can handle, you're not doing yourself a service.

So, just be where you're at and know like, wherever you can handle is completely perfect. And if you can do more later, it's great. But even just a 12 hour fast, three meals a day, whatever it is, still, like congratulate yourself because you've made a change, and you've probably done some benefit to your body. You can literally... I definitely want to say, like you can literally only be where you're at. So, be content wherever that is.

Dr. Jockers: Yeah, I totally agree with that. I kind of look at it, like again, like using the exercise example. If you've never trained you might start by going out and taking a walk on a daily basis. Now, it might be like a 12 hour fast, for example. And then all of a sudden, one day you're feeling really good and you're like, "You know what? I'm gonna do like a 10 second jog here." You're kind of like pushing it up, just a little bit, just kind of challenging yourself a little bit at a time and also paying attention to how your body feels, and how you respond.

Typically, if you didn't have a good night's sleep, it may not be the best day to fast. A better day to fast would be the night after you had a really good night's sleep because your leptin levels are going to be more normalized. You're going to have less hunger cravings, less stress response. Your cortisol is going to be higher if typically, you haven't slept well. So your hormones are just going to be more in line, right? And they're going to respond more accurately when you've had a good night's sleep. So I think that's really crucial. Any other considerations?

I know you're an expert in women's health, and I always tell my clients, like, "Men, for me, they're pretty easy to get them fasting. They see real good results quickly." And then for women, some women do great right off the bat and they can live an intermittent fasting lifestyle and just do amazing with it. And then there's a whole portion of women that just can really struggle with it. So you're probably dealing with that demographic. So what kind of other pointers can you share with that?

Bridgit: Yeah, I have a few things. And probably if we talk again in a year or two, I'll have more. One I would caution about is that it's not all about weight with fasting. And I know when I first started to experiment with it, I was like, "Oh, how skinny can I get?" and I don't even think like that normally, but it just sort of came into my head. So if you're a woman who's struggled with your weight, and now you're kind of using this as a tool, like, I think you can use it as tool, but you also need nutrition. You need to like, enjoy meals with people sometimes.

Especially if you have a history of some eating disorder, like be careful with this. I do think it can really help you find a new weight set point. However, I have some clients who already do some intermittent fasting, partial fasting and they're not seeing their weight change that much. So I think there's other things to look at. What are you eating when you are eating? Is your thyroid working? What is your toxins levels? So there are other factors to weight besides just fasting that you may need to look into.

You know, as cycling women, our appetites are changing, our needs are changing all month long. I just did a three day fast because I'd come back from the holidays, I was feeling gross. But then when I stopped fasting, I was like so ravenous. And I was like, "Oh, I wonder what's wrong." And I was like, "Well, I'm so close to my period," and it's just like a hungry time for me. So I'm kind of speculating that maybe more around ovulation, just in that like week two, week three, ideally, like maybe around day 14 when your body is kind of high on hormones, that might be a nice time to fast.

I'm just guessing. I'm kind of still working with that because this is the first time I discovered, "Oh, maybe this wasn't the greatest time of my cycle to fast." So I think that's something to think about. I used to

really think... I used to read, "Oh, you need protein every three meals for building hormones." I don't know if the science, when you read about fasting, totally backs that up. But you do need protein to build hormones. You need all your nutrition. So again, like, be judicious, listen to your body, you know. If it's feeling like, "I just really need like a steak today," like you just need to eat, maybe it's not the time in the month for fasting for you.

Dr. Jockers: Yeah, I mean, I think you made some great points there. I would say to piggyback on that, number one, if you've had a history of an eating disorder, you really shouldn't be making the decision to fast. You shouldn't be talking with your spouse or your psychologist, or somebody that really loves you. They should be the one to give you the approval to do intermittent fasting. Just because you've had that history and you don't want to reopen that way of life. And so I think that's number one.

Number two is, I always tell people, just like you said, like, don't even think about weight loss with fasting. Do it for the energy, right? Really, you know, the weight is going to come if you're doing the right things to help balance your hormones. The cool thing about fasting, when you get in a good groove and you find the right fasting cycle for you, you should notice really good energy and really good mental clarity. And that's just going to make you better at everything that you do. And the weight will come as a side benefit there. So I think that's a key point there.

And, yeah, when you're menstruating, you're obviously losing blood and you're losing nutrients, and you need to replace those things. So it tends to be a time that would be better for you to feast because really, when it comes to fasting, we use a feast. It's not like you're just... we're not talking about calorie restriction long term, that's not healthy for your hormones. We're talking about more of like a feast, famine cycle, which is really ancestral. Our ancestors didn't have access to food to eat every protein, every three hours. It just was impossible for our ancestors.

When they had food, they ate as much as they could because they didn't really have good adequate refrigeration and ways of storing it. So they ate as much as they could. And then sometimes they would go very long periods of time, sometimes days without food, without their next meal. And so that's just kind of built into our DNA, our body actually knows how to go through that feast, famine cycle. And there's going to be certain periods of time, like when you're menstruating, where that's probably a better time to really focus on feasting. And then as you get more into after that period, and then into like that ovulation cycle, probably would be a better time to implement more of the fasting. So I think that's great. Really great advice.

Bridgit: That makes a lot of sense. Yeah. And I think older cultures

recognize that as the time for rest more, than our culture does too. So there's some great books and resources out there if you've never kind of thought about scheduling your life around your cycle. It sounds bad, but it actually really is an advantage. Which is why I suggested maybe fasting during ovulation because you're really like peaking in a bunch of ways. Your energy is open and then if also your brain is working better and you're more energetic, it sounds like a pretty great thing to me.

Dr. Jockers: That's right. That's right. So you're more productive during that period of time. So you could spend less time eating and more time just doing whatever it is that you do to...

Bridgit: Just getting out there, yeah.

Dr. Jockers: Yeah, exactly. So that's great. Well, Bridgit, it's been a really great interview. I've been really interested in this topic. And thank you so much for bringing your expertise to it. And where can people find more information about you?

Bridgit: My main website is just my name, bridgitdanner.com. So if you're getting started on this mold journey and you're wondering about your health, you've got to, again, start where you're at. So we have a lot of resources, just if you have a question mark about mold. I'd love to like, help you, support the education on that.

Dr. Jockers: Awesome. Well, thanks again, Bridgit. You can find all her information on the page here. Definitely check her out. She's got some really great content, great articles, and definitely follow her on social media as well. And so for all the listeners out there, I just want to leave you guys with this last thought that fasting is a way to really unlock your dormant healing potential. You have this incredible healing potential within you. Fasting helps remove the interference so your body can heal itself. It's safe if you do it appropriately, like we've been talking about in this summit, extremely powerful, and it just might transform your life. So we'll see you soon. Be blessed, everybody.

Fasting, Ketosis, and Cancer

Guest: Dr. Nasha Winters

Dr. Jockers: Welcome, everybody, to Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. And I'm your host, Dr. David Jockers.

And I'm excited about today's interview because we're going to go into cancer, the idea of basically the metabolic theory of cancer. And really we've been told that cancer is a genetic disease for so long that we really weren't given much hope other than conventional medical therapies and what's happening with science and also with healing breakthroughs that are going on with a lot of different practitioners. We're realizing that that's just not the case, and that fasting and ketosis can actually be really powerful tools to help in preventing cancer and also modalities that we can utilize, lifestyle interventions that we can utilize in order to overcome cancer and if we want to do natural therapies or if we want to do it in combination with conventional therapies,

And so I brought on a good friend of mine who also happens to be an expert in this area. This is Dr. Nasha Winters. And Dr. Nasha is the founder, CEO, and visionary of Optimal Terrain Consulting. She's a nationally board-certified naturopathic doctor, licensed acupuncturist, and a fellow of the American Board of Naturopathic Oncology. She lectures all over the world, training physicians in the application of mistletoe therapy, and consulting with researchers on projects involving immune modulation via mistletoe, hyperthermia, and ketogenic diet. She lives in Durango, Colorado. We were just talking about how there's snow out there right now. I'm in Atlanta, Georgia here, doing this

interview in October. And it's absolutely beautiful. It's like the perfect time of year out here. She's in Colorado in the snow. She loves that. I don't. That's why I live in the South.

Her book, which she co-authored with Jess Higgins Kelley, is *The Metabolic Approach to Cancer*. Amazing book, I highly recommend it, one of the best books I read this year. And that's why I invited her on to my Keto Edge Summit, as well as this Fasting Summit because she is a pioneer in this area, and is a wealth of knowledge, and also just has an incredible personality. It's very endearing.

So, Dr. Nasha, thanks for being on the Fasting Transformation Summit. And I am saying your name right, right?

Dr. Winters: You are rocking it.

Dr. Jockers: Because I know everybody gets that wrong.

Dr. Winters: Exactly, exactly. It is now emblazoned into your brain.

Dr. Jockers: That's right. That's right. Well, tell us your story and how you got into this.

Dr. Winters: Sure. Well, my experience is pretty basic. I had a diagnosis that left me with no options. Unfortunately, I had a lot of symptoms. I had a lot of illness and a lot of health issues in my youth. And so part of that, I think, is what kept me in the dark about what was going on for me because it was sort of normal for me to have major digestive issues and pain patterns and hormonal patterns and period patterns that it just sort of evaded my attention for some time. It was more of just the same.

By the time it really started getting bigger and louder and landed me in an emergency room several times a month over several months before the official diagnosis, just shy of my 20th birthday—so I was 19 at the time—of a terminal ovarian cancer process. I was so sick and so far gone that my organs were in failure. I was filled with ascites. I was terribly cachetic. And they knew that even pulling the fluid out of my belly could possibly kill me because of the fluid shift. And they also knew that chemotherapy at the stage where my organs were at that time would have absolutely killed me.

So they basically said, "You're going to die either way. You've got a few months at best." And, of course, I now know that I probably had a few weeks at best, from what I know of the condition that I was in. And they said pretty much, "Get your affairs in order. We can't even offer you therapy at this time."

So sometimes when we're given no options, it opens up many options.

And so it set me on a journey, 27 years later as of October 21st of 2018, I have been learning and applying what I've learned to my body, as well as tens of thousands of patients over these years. And that was informed fully by one of the things I stumbled upon in my small, relatively underfunded liberal arts school.

At the time I stumbled upon an outdated textbook talking about the work of Dr. Otto Warburg and the metabolic approach to cancer. And from everything I was learning and reading at that time, that is the one thing that jumped out at me and stuck with me. Also, at that time, I started learning about naturopathic medicine. I was on my way to conventional medical school. That was my goal, my journey, my vision.

Obviously my life had a different plan. And I started running across the ancient works of people like Benedict Lust and other pioneers of the naturopathic medical field, which utilize fasting as a means to heal the body. Of course, we didn't know about autophagy and even mitochondria at that time, of their work in the earlier 1800s.

But what we now know today when we look at the work of these pioneers way ahead of us is they were on to something. And unfortunately, thanks to things like Watson and Crick and the DNA understanding of our moving in that direction of diseases as a DNA issue, as a broken gene issue, we kind of left a lot of these pieces behind.

But I'm here to tell you at that age when I was so sick, and when you have that much cachexia and you are a body that looks and feels like you're nine months pregnant or beyond, you don't have room for food. So my ability to eat was nonexistent. And frankly I think I went an almost 30-day fast in the beginning because I was so sick. Anything I put down came back up. So I was able to utilize accidentally out of sheer necessity, an old tool that you are doing an entire summit about right now.

Dr. Jockers: Absolutely. And I want to go into more detail on cachexia and cancer and fasting as we go through. So we definitely want to come back to that because obviously a lot of people that are dealing with cancer are dealing with cachexia. And the idea of fasting just seems so counterintuitive. So we'll definitely come back to that.

But before we do that, the title of your book is *Metabolic Approach to Cancer*. So what do you mean by the metabolic approach?

Dr. Winters: Well, the metabolic approach, there are multiple ways to get your energy system moving properly and being flexible to whatever conditions it meets. So when I talk about a metabolic approach to cancer, I'm talking about manipulating our chemistry back to the way nature intended. We have pretty much done everything against nature

in living on the planet today.

So things that affect our metabolic motor, of course, our first thought is food. So we've become pure sugar burners since the 1850s when we started to process sugar and flour and started to put it in everything. In fact, we were all low carb before that time. About 30% of our calories came from carbohydrates, which, today we would say, "Oh, that's a very low carb diet," whereas today an average of 70% of our diet is carbohydrates.

So we've, in a short period of time, changed that engine where we should have been effortlessly into burning sugars and burning fats and adapting in our environment and our world around us. We've now kind of gotten stuck in one gear. And that's where we've been in the sugar-burning gear.

Add to that light. Light has come on...I should say fake light. So bringing on artificial light into our world has just been detrimental to our burning of our metabolic engine as the food we ingest. And then things like blue screen time in and of itself is far more toxic to the mitochondria than even probably sugar.

So those are patterns we're very out of rhythm, which when we we're out of rhythm on our metabolism via sugar metabolism, and we're out of rhythm with our circadian rhythm from light/dark cycles, that throws off our hormones, our stress chemistry, obviously our sleep patterns, our emotional wellbeing, our microbiome, our ability to deal with toxicants in our world around us. It throws off the whole terrain.

And so in helping my patients understand what is off in their terrain and prioritize and start to address those and restore the rhythm in their lives helps to make them that metabolically flexible being who has a much better outcome to conventional therapies, to non-conventional therapies, and even for folks who are striving to prevent chronic illness and cancer overall.

Dr. Jockers: Yeah. Absolutely. And it's very thorough. And I love the idea of the terrain because, in a sense, we're biological beings. And so that that's the same concept of we're trying to grow a garden, a garden has essential needs. We need soil that has nutrients in it. We need water, good, clean water. We need a non-toxic environment. We need sunshine. And we need love.

And so it's kind of that idea of if we want to have a really good garden, we need that. And we can't have weeds overgrowing either. So you think about like infections and things like that. And so you use this idea of the terrain ten. Can you describe each of these ten elements? You go into a lot more detail in your book, so people can pick that up. But I would

love for you to touch on each of these elements so people really have a good understanding of the holistic idea of our bodies and how it works together.

Dr. Winters: Absolutely. And I love that you precluded that with a garden analogy because that's precisely why I use the terminology "terrain." I resonate with nature. And I think my patients can understand even if they're not gardeners, those metaphors go far.

So the first of the terrain 10 patterns, and these are patterns that over 25, 26 years of my own journey and that of helping tens of thousands of patients is the main 10 patterns that impact our ability to fight disease or contract disease. So it's pushing us into a continuum of health or disease.

So the number one piece is our epigenetics. And I believe you talked about this in other discussions, both on this summit and previous. But basically that's what's been handed down to us from the generations above us and things along the way in those previous generations, like a world war experience or extreme trauma can change our epigenetic, our genetic expression, a toxicant exposure.

So a lot of our Vietnam vets have come home with a lot of damaged DNA that they've passed on to their children because of things like agent orange exposure. Those are examples. DES in our mothers who were trying to prevent miscarriage of the mothers between late 1940s to 1970s were put on these hormones that changed their epigenetic expression, and made their children more susceptible to cancers and other illnesses in the future.

So those are some examples even that might have been the deck of cards you were dealt in this lifetime, how you play them is entirely up to you. We can change their expression with our diet and lifestyle.

Part of that diet and lifestyle is the next piece, which is the sugar. We've already talked about why that's changed so much where we went from 5 pounds on average of sugar per person per year to well over 175 pounds per person per year. Imagine how your car would run, dumping bags and bags of refined sugar into your gas tank. You might sputter down the road for a while. But it's not going to last long. And in essence it's rusting us from the inside out.

The next big thing that is very different to our humanity in the last 60 years or so is the toxicant exposures. We are swimming in them. I love that we all do our best to eat organic. But unfortunately things like glyphosate, Roundup, don't know those boundaries. They don't read signs and say, "Organic, don't spray here" because they drift. They have a 2-mile drift. They infuse our water supply. They infuse our soil supply.

And so that is what we're being exposed to constantly, even when you're doing the best you can.

Plastics and other things have only been on the market for a short period of our human evolution time here. So there's a lot of things, I think about 80,000 new chemicals since the 1960s, of which only about 200 of them have been properly tested. And we haven't even really done the testing for how they accumulate and bounce off each other.

Then it moves into how those chemicals in the foods we eat and epigenetic are impacting our gut, our microbiome. This is huge. We have been monocropping our food sources for the past 50, 60 years, which, guess what, has monocropped our microbiome. And our health is really based on our microbiome diversity. So we have deconstructed the microbiome and monocropped ourselves, as well, which has made us also more susceptible to disease process.

Then we spill into the immune system. And in my world of cancer, that is critical. In fact, just a couple of years ago most of my oncology colleagues unfortunately still denied the role of the immune system in treating cancer. But now that it's a billion-dollar drug industry, it's now all the rage. In fact, it won the Nobel Prize in science this year.

So it's something that I take extreme focus on in my patients because you can push back the cancer all you want with any cytotoxic intervention. But if the immune system isn't intact, it will come back and back and back. That's why even the American Cancer Society statistics show that 70% of patients will have a recurrence after an initial diagnosis. To me, that's not okay. We've got to do something different. Then after that, inflammation. We are an inflammation nation. And what used to kill us were diseases of infections. Today we die of diseases of inflammatory processes: cardiovascular disease, cancer, diabetes, osteoporosis, Alzheimer's. They are all very inflammatory conditions. And we're just inflamed thanks to and lots of the things I just talked to you about: the food sources, the water sources, the air sources, the immune disruptions, medications, the toxicants. All those things are contributing. One of the bigger drivers of inflammation is sugar. So that's a biggie.

Then we spill into blood circulation and something known as angiogenesis. So angiogenesis is the growth of new vasculature to a tumor. So it basically robs the body of its nutrients to give it directly to the tumor. They're greedy little buggers. They will divert all the attention and all the nourishment to themselves. And they particularly love low oxygen. And they particularly love lots of sugar.

So you want to oxygenate the tissues. Moving your body, exercising, sauna, doing hyperbaric oxygen therapies that strongly oxygenate the

tissues. CoQ10 is a really great way to oxygenate the tissues because it also helps the heart. It's heart food, is what I tell my patients. So it helps the heart move better. So those are important.

And so if you sit on your butt all day as most Americans do...We spend less than 15 minutes outdoors. And most of us don't have any exercise outside of walking to and from the kitchen or to and from our work, car to the work, that's a problem. So we want to move the body.

And then that segues into hormones, which you can already see how these connect. Not one of them is happening in a vacuum. But we are also swimming in a hormone soup today. So I had a conversation in an interview yesterday that there really isn't such a thing as estrogen deficiency. It really doesn't exist.

There's estrogen metabolism problems. There's epigenetic issues that influence how our body processes the hormones that we are being faced with. We are already having a problem because of certain SNPs with how our endogenous hormones work. But now we're swimming and competing with endogenous hormones that are far more aggressive in binding into the receptor site and way more difficult to kick out of the building. So that makes us feel like we need more hormones. So we're just layer caking and causing more problems.

And really we are just in a soup of it from the plastics to the endocrine disrupting chemicals to the body care products that are very endocrine disrupting. Our body is just covered with millions of mouths. Our skin is our largest organ of elimination and absorption. And we are smothering it with these chemicals that are changing our epigenetics and changing our hormone expression.

And then the final two to me are very woven in together is circadian rhythm, which won the Nobel Prize in 2017. And I should also add that for sugar, 2016's Nobel Prize went to autophagy, which is the entire experience of what we're talking about today. But circadian rhythm and being out of rhythm is very damaging to our immune system, to our hormone system, to our psychology, to our microbiome, everything. And that is often triggered by stressors from the environment and our response to stress.

So it's also impossible to get away from stress today. And we are swimming in that, as well. And then, of course, all of these things impact our psyche, our mental/emotional health, which is the 10th. And our mental/emotional health impacts those other nine terrain items.

We know things like having an elevated ACE score, an adverse childhood events score, anything basically over two out of 10 yesses on that questionnaire increases your likelihood of cancer and chronic illness into your adulthood. And these are 10 things you would have been exposed

to before the age of 18.

So we know that shock, trauma, neglect, abuse absolutely changes our ability to fight disease. And if you then are staying in an abusive relationship or a toxic work environment, how can you possibly heal when you are being met with those types of things every day?

So, phew! That was a big one! Kind of blasted through it.

Dr. Jockers: I'm glad that I asked that question, though, because I've been in this industry for a long time: 10 years practicing, probably 20 years studying it. And I've heard so many different people categorize all the major causes, contributing factors to chronic disease. But I don't think I've actually heard somebody categorize it as well as you have. So I really appreciate that.

And it's really a masterpiece book that you wrote, categorizing that. And you're such a great spokesperson for it. And so by addressing the terrain 10 and using this metabolic approach, what kind of results are you seeing with your patients?

Dr. Winters: Unbelievable results because I'm also a pretty obsessive blood test person. So I don't guess. I tell my patients we test. We assess. We address. We retest. Then we adapt as we need to. We, for the most part, are looking at people's labs monthly, and at the very least every three months, so quarterly. So we are watching our results in real time. And we are watching patterns completely resolve in real time.

It can happen in a matter of days, as we've seen when we've done immersion retreats, cancer retreats where we've done their labs, basic CBC, CMP, and what my patients call the trifecta: LDH, CRP, and SED rate right before we do our retreat, and then test it a week or two after and see that we've changed parameters drastically from inflammation to blood sugar to overall immune function, nutrient absorption, organ function, etc. We can see that in just days of what we can change.

And one of the things that kind of segues into what we are going to be talking about is one of the most profound ways to change your labs very quickly is a three-day fast. And there's multiple ways to do that: three-day water fast, three-day dry fast, three-day bone broth fast. Those are things that can still help the body change its blood content, it's physiologic content literally within a matter of days.

Dr. Jockers: Yeah, absolutely. It's so powerful. And let's go into that. How can fasting be used as a tool for somebody? Let's say somebody has a family history of cancer. Like I have a family history of cancer. And I actually had developed skin cancer, as well, at 28. And this is one of the motivating factors for me to put my body into a state of ketosis and

utilize this metabolic approach.

And I actually had found Dr. Thomas Seyfried's work in 2011, and started applying that, and had great results for myself personally. And so now I just apply it, number one, to prevent disease, but also actually number two to thrive. I personally thrive utilizing this fasting lifestyle, fasting ketogenic style lifestyle.

So if somebody is out there and they have a family history of cancer, how can they apply fasting? And how can that help prevent cancer?

Dr. Winters: Well, if you are just completely new to this and you are still pretty attached to the standard American diet and you don't know really what your labs look like and you don't really know what your overall health is, first of all I would really strongly recommend you get someone on your team to make sure you are safe to do something like this, to embark on something like this.

So a chiropractic physician, a naturopathic physician, a functional medicine practitioner, a functional therapeutic nutritionist, not an RD nutritionist. I'm sorry, but you have to qualify. I've got a lot of RD nutritionist recovering friends who will also celebrate that.

But basically you need someone who has nutritional training, which you don't get from your medical doctors unfortunately. It's just not part of their curriculum. And some of them have gone on and studied on their own. Obviously we have a lot of colleagues definitely enhanced that knowledge base. But for the most part, it's going to be hard to find. So make sure you're set with somebody along those lines.

But what's a very safe place to start is simply what I call a 13-hour fast. And this is based on basic studies even in the last six months from places like MD Anderson, simply showing that women—we're not even talking about what they're eating. We're just simply saying they have a range of 13 hours where they're putting nothing into their bodies.

So that literally means finishing dinner at, say, 7 PM, and not eating again until 8 AM. So you're sleeping through the lion's share of that time. And what they've been able to show...And we're not tweaking anything else but that. That alone lowers the risk of recurrence. And this is over 40,000, I believe, women that were studied for this. It lowers their risk of recurrence by 70% compared to someone who is having that late night snack or eating right when they bolt out of bed in the morning or even awake in the middle of the night and need to eat.

In fact, if you have to have a snack or wake up hungry or have to eat right in the morning, that is your first clue that you are metabolically inflexible. We should all be able to easily and effortlessly go thirteen

hours without eating. If you can't, you definitely need someone on your team to start digging under the hood. That's the first starting point. That's an easy one.

And then if you want to start push it a little bit, I have my patients... A cancer patient who is in a stable place in my practice who's like, "I want to keep getting good response to my treatments. I want to keep things at bay. I want to keep things stable. I want to keep pushing back the progression," we do a 13-hour every day. Twice a week we do a 16- to 18-hour fast. So that's eating in a 6- to 8-hour window twice a week. And then once a month we do a three-day fast.

For those that are a bit depleted or scared of fasting, I have them bring on bone broth, really good high quality organic clean, clean, clean bone broth, preferably homemade. But there's a few companies that I like out there in the freezer section that are actually quite good, thoughtful about their process. And, of course, as much water, as much sea salt, and as much herbal tea as they want.

Most people get through that first day, and they're like, "I don't need any more bone broth." They feel great. It's a psychological issue for sure. That is their ongoing maintenance program. People like Dr. Longo's work and what I definitely do with people who are doing chemo—chemo may be every three weeks or every month—is have them do the 5-day protocol.

Now, Dr. Longo's work has brought on the prolonged fasting mimicking diet approach. That works very nicely for folks who are petrified of not eating anything, or who have doctors that are really pushing back on them doing this. So it's like our meeting-you-halfway approach.

Dr. Jockers: Yeah, it's kind of a crutch to help somebody.

Dr. Winters: It's about what? 250 bucks a month? I'm like, "You can do this for free or the cost of bone broth." But, again, that's available. And what we've seen with that is that alone works better than the chemo. The chemo with that enhances. It's like an incredible burst because it's helping the body get through the treatment, have less side effects, and actually drive the treatment into those now vulnerable cancer cells.

Cancer cells can't adapt like our healthy cells can. They get too cold or too hot. Or they get too hungry, too depleted of certain nutrients. They are vulnerable. So when you act, you bring on a ketogenic state whether that was induced by fasting or a fasting mimicking diet or ketone salts, or a high-fat, low-carb ketogenic diet—there's multiple ways to get there—you make those cells very vulnerable. So it's like that ketone state. It's the Trojan horse carrying in the death missile to those cells.

Dr. Jockers: Yeah, it's the press pulse concept by Dr. Thomas Seyfried, metabolically pressing the cancer with basically fasting or a ketogenic approach or a fasting mimicking diet like you were talking about, calorie restricted, plant-based ketogenic approach, which is what the fasting mimicking diet is. And then we're pulsing it with some sort of really strong oxidative therapy, in this case chemotherapy or radiation. It becomes so much more effective.

Dr. Winters: It does. And just to add to that, there have been plenty of studies. And talking to my radiation oncology colleagues who are hip to this way of approaching cancer, of which there's a growing force of them to be reckoned with, which is fabulous. But we already know. We absolutely know without a doubt that sugar desensitizes insulin, and sugar desensitizes our cancer cells to radiation.

We also know that it desensitizes to and lots of other therapies, including aromatase inhibitors and androgen deprivation therapy, PARP inhibitors, a lot of our targeted therapies, and likely our chemotherapy. We just haven't done the studies in there to know. But I can tell you from clinical experience, people's labs sure look different when they are fasting with their treatments. And their side effects and their symptoms and their recent recovery and their quality of life through the process is absolutely better.

When I speak to my colleagues who are oncology nurses in my own community, they always say they know my patients are. They're like, "I don't even have to ask. We know by how they're looking, how they're feeling. They are able to maintain their schedule through treatment, how quickly they bounce back, how positive and energetic they are, what they're eating when they come in or not eating when they come in." They're like, "I know who you're seeing."

And that population of oncology nurses are also springing up around the country and seeing a difference as the patients are gathered around together. It's visually incredibly apparent, as well as what they also see in the labs and how well the patients are tolerating therapy. We don't have to wait for expensive, long-term studies and analysis. We're seeing it in real life in real time.

Dr. Jockers: Yeah, there are dozens of case studies, absolutely. And so if somebody is going in for chemotherapy, let's say they've got a week prepare. What do you have them do? We are doing this interview on a Thursday. Next Thursday at 11 AM, they've got their first chemotherapy treatment. What should they do over the next week? We talked about getting a functional practitioner. So let's just say they start working on that. But what can they do at home to prepare their body?

Dr. Winters: I love this. Simply speaking, get all of the heavy

carbohydrates out from the get-go. We don't even have to restrict beyond that. At this point, when someone is brand new, I'm not even looking at urine ketones. I'm not looking at blood ketone. I'm not looking at macros yet. Let's just get simple. If we only have a week to prepare, I want you off all grains, all legumes, all sugary fruit. I'm not even going to pull out berries or small Granny Smith apples at this point because that's sometimes ripping off of that Band-Aid that's too much. And that's a little crutch for people.

I also try and get them to pull off alcohol. And if they must have alcohol, dry-farmed wines and maybe a shot of tequila, a shot of non-grain-based vodka if they have to have that. I work with people who are pretty much like boozaholics and fast food junkies. And so we start where they are.

So let's just say you're the standard American person coming in, that's how I would do it, pull that out, not even restrict anything else. Then the day you go in for treatment, maybe 20 or 30 minutes prior to the treatment, if you're brand new to my world, maybe take a ketone salt 20 to 30 minutes to at least drive you, kind of fake it till you make it, drive you into at least a nutritional state of ketosis, a therapeutic state to about your cancer cells to be more vulnerable to those therapies coming in.

When I have, let's say, a month, that's when after the week I start having them check their urine ketones. At that point, they should, especially if they are doing the 13-hour fast every day, that would also be part of that first week. Maybe now we are incorporating two days of 16-[hour] fasts a day. And we're trying to check the urine. And once we see moderate to high ketones in the urine, then we know we can graduate on to blood ketones.

Now, if someone is dealing with a stage one or two cancer, maybe we are going to strive for nutritional ketosis, which is anything below three on blood ketones. If someone's got a very aggressive process and especially a brain cancer process, I want them in the therapeutic level, so above three in the blood ketones. That would be our goal, working towards that.

But now these folks are always trying to become more metabolically flexible, then we start to have them play with things like CRON-O-Meter, my fitness pal, and start to put in their macros so they can learn because everyone thinks they don't eat sugar until you start to put your stuff into that. So even RDA nutritionists say we should be eating less than 100 g of carbohydrate today, then 25 g or less of sugar a day, and women 20 g or less of sugar a day. Most of us are eating all of that by breakfast every single day.

So that's just RD nutritionists recommendations. But if you are dealing with cancer, it is very important, even if you're not in ketosis, to get yourself below 50 g of carbohydrate a day, below 20 g of sugar a day. If you are really trying to strive for a state of metabolic flexibility, you want to maybe push that lower, maybe below 30 and 10. Those are the places you play with. But any step you take in that direction is going to make a very positive difference. It does not have to be perfect to be effective.

Dr. Jockers: That's a great, great word right there. You don't have to be perfect. You may not have to be in the therapeutic range to get the benefit.

Now, let's say somebody's been going at this for a while, following maybe they've listened to a lot of these summits, they're following a ketogenic diet. They still have cancer. They're doing the chemotherapy. And let's say they have it tomorrow. What would be your ideal fast? Would it be a 16-hour fast before? 18, 24? Is there any research on the minimal?... I don't know how to say it, but the amount of time where you get the most benefit before chemotherapy as far as fasting? And then after that, it's pretty much the same benefit. Minimal required dose.

Dr. Winters: I like that. That's good. That's good. So, actually, we do have some of that data, which is pretty cool, again, thanks to longevity researchers, people like Dr. Longo. But a quick little side note there is all the longevity researchers around the world have absolutely shown that caloric restriction and being a bit underweight actually enhances your longevity, versus the opposite. I'm just throwing that onto the table, and people start to freak because in the oncology world, the last thing they want you to do is "lose weight." But I'd like to circle back to that and cachexia in a bit.

But specifically what you are discussing, the perfect gold...So I give my patients the gold and the silver and bronze. So the gold would be if you have chemo at 11 AM on Thursday morning, your last meal is at 11 AM on Tuesday morning. That's your last meal. And then you're coming into chemo fully fasted. You're going to fast to that entire day. And you're going to then break the fast on...So if you had it Thursday morning, I'd have my patients break the fast Saturday morning at 11 AM.

So that is a five-day fast. That is based on the research of Dr. Longo. That is also based on the Prolon therapy mimicking diet that he offers that covers that window, as well. You can do it with water. I do not recommend a dry fasting at all for my cancer patients. Your electrolytes are way too funky. So I want to put that on the table. But you can definitely do it with water, herbal teas, and often bone broth, especially if they're on some things that are really depleting their electrolytes during this time.

Plus, if you're on keto, you're depleting your electrolytes. So it's nice to have the bone broths for my folks that are a bit vulnerable. But once you get good at that, a lot of people actually don't want or crave the bone broth after a while, which is great. But ultimately that's gold.

Silver would be last a meal on Wednesday at 11 AM. Then you have chemo at 11 AM on Thursday. And then you break the fast at 11 AM on Friday. So the day before, day of, day after, circled around that. That's the silver platform. There is still so much happening in that time, of what you're doing, in chemistry, it's quite brilliant.

But the bronze, if you will, where you can get still some bang for your buck, would be a 16-hour fast prior. So you have that 11 AM, just back that up that your last meal is, what, sometime in the mid afternoon.

Dr. Jockers: Right. Or an early dinner the night before. Yes, hydrate well the morning of.

Dr. Winters: Exactly. Take your mug of bone broth if you're scared to the chemo. But definitely something with a lot of hot tea and things that are very nurturing. I love to drink ginger tea. But, yeah, that's how I would do it.

Dr. Jockers: How about some exogenous ketones? I know you had mentioned that. So that's another thing that they can do maybe beforehand.

Dr. Winters: Especially, if they're hungry, that will kind of pop them out of it pretty quickly. Like a pack of those, there's lots of different brands out there. But if you offer a typical dose, often my patients only need like a quarter to even half of that just to kind of pump a little bit, just kind of clear the brain, clear the shakies because they might, especially if they're new to this, they might be going through a low carb withdrawal at the same time. So the ketones can really help them get over that hurdle.

Dr. Jockers: Yeah, and typically the ketone salts usually have a bunch of electrolytes. So you can benefit there. Plus the ketones go up. So that's going to reduce the inflammazones. So when you get that chemotherapy in there, that can be a nice little crutch for you.

Dr. Winters: I love it. Definitely even if I have folks in robust levels of therapeutic ketosis, even before an oxidative therapy like hyperbaric, radiation, hyperthermia, high dose IV vitamin C, I would have them take 20, 30 minutes before ketone salts. I want them really topped in those oxidative therapies like that because those go in hard and come out pretty fast.

And so take advantage of that with the ketones. It really is protective to

the whole, but also really drives those therapies because they tend to have a lot of fallout, a lot of tumor lysis, a lot of cytokine release. And that can just feel yucky. So that will help them with the yuckies.

Dr. Jockers: [*baby cries in background*] Wow, I really like that.

Dr. Winters: Maybe your little one needs some ketones! [*Laughs*]

Dr. Jockers: Yeah! Oh, can you hear my little one?!

Dr. Winters: It's okay. It's good for me. I just cracked up because I just laughed about your little one and my dogs who are wandering around.

Dr. Jockers: Yeah, I've got twins. By the time the summit runs, they will be three.

Dr. Winters: Get out! I forgot about that!

Dr. Jockers: Yeah, and then I also have a five month old, as well. So this house, there's always a somebody crying in the house.

Dr. Winters: Usually you and your wife, I'm assuming, are crying?

Dr. Jockers: That's right. Well, I will tell you that having three kids under three is a lot of work. And using fasting has really helped because my energy is amazing. My productivity is incredible.

People are like, "How are you doing so much and being there for your family?" In years past, it would have just totally dragged me out. I would have been so burned out. But fasting has really supported me no matter what kind of stress I'm under. I'm just so resilient. And fasting helps. And that's one of the reasons why I was inspired to do this summit here.

And so you've given us some really great advice as far as how people can apply fasting, particularly when it comes to cancer and cancer therapies. So let's talk about, because we wanted to touch base on cachexia because obviously... And I have a patient going through this right now where she is very, very, very thin. And she's very, very worried about fasting at this point. And so the idea, the thought would be, well, if you fast, you're going to lose even more weight. And, of course, the doctor is saying, "It doesn't matter what you eat. Just eat a lot. And you just need to gain weight. You need your energy. You need to eat for your energy." And so what are your thoughts on that?

Dr. Winters: First of all, so wrong on so many levels! It's hard for me not to even throw F bombs or what-the-hell bombs on this. It's insane because we actually have loads of evidence showing that that suggestion

we've given to cachexic patients for 50 years in oncology has never worked ever. They could eat 20,000 calories, drink a Boost shake every hour, get totally paranoid on nutrition, and you will die of cachexia.

In fact, what I'm here to tell you is those are absolutely going to speed up the dying process. My colleagues in the oncology world, and nurses in hospital wards everywhere, when someone gets on something like TPN, they call it the death March. This is known as the beginning of the end. So that might scare some people who are listening to this. That's why there's better ways. You can even get keto-friendly TPNs that are at least better. They're not very clean. But they're a heck of a lot better. Request better options.

Dr. Jockers: At least they're not loaded with sugar. If you look at Ensure, the first couple ingredients are corn maltodextrin, which is GMO sugar. And they have actual sugar. Then they have glucose. Then they have fructose. So it's like the first four ingredients. And they have corn oil and soybean oil right afterwards.

Dr. Winters: And the only thing that ensures is your death. Cachexia is a state of metabolic dysregulation. It's not a calorie in, calorie out process. So there's a few things here. Cachexia is a metabolic process that you can see on laboratory investigation. Being skinny is not dangerous, does not kill you. Being cachectic does. Forty percent of cancer patients succumb to cachexia. So it's a big deal.

But the reason why they succumb is you're being treated for it incorrectly.

And they're terrified to do anything different because they are trusting at this point really bad, really outdated advice. So cachexia, the way someone is actually in cachexia is to look at their labs, not their bodies. Don't look at the bodies. The bodies mean nothing because you have fat, fat people in cachexia. And you have super skinny people down to skeleton levels that are not cachectic at all.

The labs are the determining factor. We are actually looking for something known as sarcopenia. So all in combination, for someone to be in a state of cachexia, you have to have at least two things happening: low albumen under 4, and low protein under 7. If both of those are low, I know they're in a state of low grade cachexia. If we also see low, low calcium below 8.8 and low creatinine below six, we are in full-blown cachexia.

And if you look at their creatinine and what not, you'll also see those are quite empty. They're breaking down muscle very, very quickly. You'll see the elevated LDH, lactate dehydrogenase in these patients. That's when you know you're in a freefall of sarcopenia, cachectic state. Looking at someone, measuring them on a scale will never tell you anything, not

even body fat.

Dr. Jockers: Exactly. And that all comes from a simple, complete blood count

Dr. Winters: \$12 out of pocket.

Dr. Jockers: Yeah, exactly.

Dr. Winters: \$12 out of pocket. So here's the difference. A story that I always highlight to my patients so they understand how big of a deal this is. We had people who survived unbelievable atrocities through the Holocaust, through World War II in these concentration camps that were literally starved down to nothing but bones.

Here's all these people that somehow survived those atrocities. And the second we burst open the doors and came in to liberate them, we handed them candy bars. Do you know how many thousands more patients died right after that? We've lost count. We don't even know for sure. What happened and what stimulated an entire study of this was something called refeeding syndrome. Look it up, folks.

This is what your doctors are to you when they put you on TPN, when they put you on Boost and Ensure, especially if you've been eating a metabolically flexible kind of diet, a lower carbohydrate diet or been fasting and they put that in, the danger of actually putting you into immediate organ failure is very real.

I've seen it. That's one of the things I've seen kill my patients over and over and over in the years, no matter how much I'm screaming this at them and their family members, they get bullied into this. And I've luckily been able to pull people through it. But the only way personally I have ever seemed to overcome cachexia is with a metabolic flexible state, whether that's high-fat, low-carb, whether that's fasting and ketone self-supplementation, those are the only ways I have personally ever seen.

Luckily people Dom D'Agostino now and others are doing research. We actually have several trials going on on this. We know and have known for some time that more calories and more carbohydrates will never overcome this. And yet the first thing patients are told is, "Eat whatever you want. Eat a lot of pasta. Eat a lot of bread." And that they do because their brains aren't working. They're very starved. And so in my cachexia patients, sometimes we need a little bit more protein. We never need more carbohydrate.

Dr. Jockers: What are your thoughts about branched-chain amino acids, supplements like that?

Dr. Winters: That can definitely help. And if I have access to patients in an environment where they have an integrative practitioner that does IV therapy, we bring on amino acid IVs. We bring on amino acid lipids. We do a lot of things to intervene.

I even have, through Charlie's Foundation, they make a cookbook called *Blender Keto*. We put that into feeding tubes. I've had patients in, we put into feeding tubes things like that and they've completely come out multiple times. In fact, I have a few that will tell their stories someday of this.

I have patients who have gone fasting because of bowel obstructions, 10, 12, 20, 30 days and gone back in for a scan to start to initiate therapy when it seems like their bowels were moving again and no evidence of cancer. I've seen that's over and over and over and over again, to much of everybody's dismay.

In fact, I just had that response yesterday from a patient who has been fasted because of a bowel obstruction from ovarian cancer. And everyone was ready to start blasting her with radiation and chemotherapy. And she went in to have a debulking first because they thought, well, maybe we can get some of the tumor out of the way now. They got in there, and it wasn't cancer. She had a little twist in her colon.

And she has been implementing fasting a lot. And this is a woman who had had no response to conventional therapies, had multiple recurrences and progressions and has not been on chemo for over 11 months now. So this is incredible that her oncologist luckily is so excited about it, he's giving my book to every one of his patients, has been for months now just watching her process.

But you do not underestimate the power of a free therapy. And do not get swindled and seduced by very outdated, misinformed dietary advice with regards to your cancer care.

Dr. Jockers: Yeah, absolutely. So true. And cachexia patients can really do a lot of things that we are talking about in this summit. One of the concepts we talk about is one of the feast/famine, where we are consuming similar amounts of calories roughly. We're not necessarily counting calories. But we are eating to satiety. We're just eating less often. So the meals will be larger typically, although satiety points can change. We're not trying to force feed beyond satiety. But if they were to reduce their feedings to two to possibly one time a day, at times it can be really, really powerful.

Dr. Winters: What's so interesting with cachectic patients, their appetite goes away. It's part of the condition. What I have to do, because if they try and eat a big meal at one time, it backfires. So I actually make

those who are actually truly in cachexia, not the skinny ones, truly in a metabolic state of cachexia, I have them set an alarm. And I have their family and friends rally around them. And I have them eat something nutrient dense, typically high in fat every hour.

And I warn them, “Your stomach is the size of a fist. So I want you to at least, get a quarter of your fist into your body every hour.” Then it starts to kind of reset and re-trigger the desire to eat again. It’s like you’re exercising a muscle that was a bit depleted. And so that’s really powerful.

The other thing that can really help these patients overcome that blocked needing or wanting or having a desire to eat is medical marijuana and high CBD. This is one of the biggest gifts. The formulation that we created for our patients was a CBD formulation. We basically made our own shake. Because of FDA regulations, we did not have \$1 million to infuse into it.

But I have a lot of patients who will tell you that it saved to their ass a couple of times. So then we have them build it themselves. We kind of have the foundation, then they added their own stuff with recipes. Eventually we know we are going to get an investor who wants us to actually turn this. “We’d like it to be the next Boost or Ensure,” but a whole different ballgame.

And so we have people interested obviously because it’s a huge issue to worry about because with sarcopenia, cachexia, not just in cancer but in cardiovascular congestive heart failure, AIDS processes, other muscular, MS and Lou Gehrig’s disease, we see that sarcopenic wasting in a lot of other chronic conditions. So this goes beyond the cancer patient, mind you, for sure.

Dr. Jockers: Yeah. Yeah.

Dr. Winters: That’s actually how this formulation got started was a patient who had a child that’s failure to thrive. And they didn’t expect him to survive. And now he’s like eight years old.

Dr. Jockers: This is like a meal replacement with CBD. That’s such a great idea. When it comes out, I’ll invest.

So let’s talk about how you apply fasting. What is your typical schedule like, let’s say on a week, a monthly basis, or however you apply either extended fasting or intermittent fasting?

Dr. Winters: Perfect. Well, again, I had some accidental forced fasting early on. But then going on with that process, I’ve learned that it was actually good for my body to have a good 5 to 10 day fast each season.

That's basically how I've been doing it 27 years at this point on purpose at that point.

The other thing you had mentioned before the show that you had just had a really bad illness recently and kind of accidentally fasted, and it did wonders for you. I had a similar situation in Portugal many, many years ago. We don't know quite what it was. We don't know if it was my cancer on the move, which is what we were actually thinking was going on, or what.

But I got super, super sick and couldn't keep anything down, likely a bowel obstruction. But I ended up fasting for two weeks, lying on the couch. My sister in law, while she was traveling in the US I was staying in her place in France. And couldn't eat a thing. Couldn't get off the couch, nothing. And at the end of that two weeks, it was like finally—this was early on in my cancer diagnosis—I popped through something really big, and frankly never went back to square one where I had been really struggling for a couple of years to get me out of that place. So that was an incredible moment for me. And that's why it became a ritual seasonally.

But today I still kind of like to do a 3- to 5-day fast minimum seasonally. But when you talk about how you can cope with three little ones under the age of three and life and your work and everything else, my jamming days, I have 16-hour work days: Tuesdays, Wednesdays, Thursdays, just to back to back, really dense patient schedules. That's when I fast. That's when I'm most on. And that's when I'm clear as a whistle.

Most of the time I'll just not eat anything during that time, maybe a cup of broth here and there if needed, lots and lots and lots of herbal tea, and lots and lots of water. And I sauna and I work out and do all those things.

Every once in a while, I'll eat. I'll have a light meal because my husband loves to cook. And that's his love language. So I might eat something small with him in the evenings on those days, depending on our schedules and what's going on. So ultimately maybe a 22-hour fast for each of the three days. But that's huge.

And then if I know if I've got something like holidays coming up, I will preempt because I know I give myself some flexibility. I'm super metabolically flexible now that if I overeat something in the carbohydrate place, the next day I can be just within a 13- to 14-hour fast, I'm already back into nutritional ketosis. I don't have to try anymore. Just going to bed and waking up, I can be in ketosis. That's a beautiful place to be.

But around the holidays, here's where I know I maybe will push my limits

a little bit. I might thoughtfully do a longer fast before and after just as pre-cleanup and post cleanup.

Dr. Jockers: Yeah, Absolutely. It really gives you more freedom in a sense, time freedom because you're not trying to prepare meals, mental freedom because especially fasting, I always tell people it's like exercise. When you first to get started, it's very uncomfortable. You don't feel good. You think it's a horrible thing.

But as you start to train your body, you actually start to crave it and thrive under it. I know for me, I do three days a week where I do one meal, kind of like what you're dealing. So for me it's typically Wednesday, Saturday, and Sunday. I just do one meal. And then my workout days where I do strength training, I do two meals on those days, Monday, Tuesday, Thursday, and Friday typically.

And it's like by the time I get to Wednesday, my body is ready for the 24-hour fast I'm about to do. I'm craving it. I haven't eaten since lunch yesterday. And I feel amazing. My body is craving this more extended period of time when you start to do that.

And it does give you more freedom to where your body is more carb tolerant as you build this fasting muscle. Even though you obviously want to make good food choices, you don't have to be quite as strict when you do eat because you are eating less often. And that's a great thing.

Dr. Winters: And another strategy you just made me think of when you were describing ways that you fast, I always when I do international flights, I just don't eat because the food is like poison. I don't want to haul all my food with me on a 12-, 13-hour flight. And I get off that plane. When I used to eat, even if I brought my own food, I would have terrible lymphedema because of my own medical history for days after. If I don't eat now on international flights, I get no lymphedema. That was a bit odd. I tried that event a couple years ago. I was like how did I never know this?

It even short flight, I just know on travel days if I've got a total of six hours or more a day of travel, I just don't eat just to keep me ready. So especially if I'm going to a conference, like I'm getting ready to go speak at a conference in San Francisco this weekend. I won't eat on the day traveling so that I can be crisp and clear from my talk on Saturday type of thing. So that's how I've just learned how my body responds, and how she wants it done.

For people, I don't cheat because my body really freaks out. I can't do grain. I've got celiac. So I don't ever. So I know my own places. It's not worth it to me to go and have a piece of cornbread. It just isn't. But other

people have a little more flexibility to that. But when I can cheat more on is I love a really good keto Margarita or a beautiful glass of wine. Or I love when cherry season was in in July. It didn't throw me out of ketosis, or peach season. Those are kind of my cheats. That's what I will include and gravitate for it. I could give a crap about the bread or grain.

Dr. Jockers: Those are great seasonal fruits. Beautiful, yeah. Absolutely. And that brings up just the fact that a lot of people think fasting is something maybe men can do. Fasting is very popular online. And most of the people that are teaching fasting are men. So a lot of people are thinking...

We have a lot of women speakers on this summit. And so a lot of people think, well, women can't fast, or fasting is bad for women. And so you're here, a woman, fasting. And you've been doing this for 27 years, applying this. And you're working with a lot of women that are fasting. So what are your thoughts on that?

Dr. Winters: Well, I'm glad you brought that up because there is a little bit of mythology around this. You want to work with someone's chemistry. But I'll be a little TMI for a moment. But I'm definitely moving in at 47 years old, moving into perimenopause. And some things are changing in my body. And I actually find right before my cycle, I can't fast. I get hungry. So I listen to my body.

And as soon as the weather starts to get cold, the first bit, I'm like, "I can't fast this week." But I'm doing things like more broth-y. I'm still eating maybe caloric restricting in those days. But I just listen to my own feedback. But as far as thyroid, the myth that this hurts your thyroid, my thyroid is working for the first time in my entire life by incorporating fasting on a regular basis.

But as far as stamina and adrenal function, for me my particular SNP profile, for my particular chemistry, this actually lessens the stress mode because my body gets stressed when it has to digest. I've always joked with my husband, "I wish I could be a breatharian." Because I feel a shift. My chemistry is so sensitive. I'm a canary in a coal mine with so many foods and so many things because of my medical history and the types I was and as a baby and what not. It's really messed with my microbiome that I'm just very vulnerable. So I, for me, feel better.

Now, women who are concerned about this, that's why I don't have them do just water fasts. That's why a bone broth is absolutely fantastic. You are not causing any problems with this. You're getting all of your major minerals and nutrients. And if you want, I love things like Dr. Cowan's Greens through DrCowansGarden.com. You can sprinkle those into your bone broth to get a little nourishment if you feel like, "I have to get something more in here." Take a little tablespoonful of coconut oil if you

just feel like you need something. But it's more emotional. It really is.

Dr. Jockers: Yeah, it really is. That's really the biggest thing. It's a mental/emotional block. And I think what people have to realize, again, it's like exercise. If you went to the gym if you were sedentary, you had not worked out in, let's say, 10 years, or your whole life, you went to the gym and you worked out with a personal trainer, somebody who was really pushing you, you would be extraordinarily uncomfortable.

Dr. Winters: For days.

Dr. Jockers: Yeah, and if you based all of exercise off that one experience, you would think, this is terrible. How could people possibly do this? This can't be good for anyone. Yet, in our society, of course we know that it's not. We just understand that.

And it's really the same with fasting. Your first experience, don't expect it to be comfortable or fun. It's not fun or comfortable. But as you start to build up your fasting muscle, it gets easier. And you start listening to the messages that your body gives you. You have better intuition and a better overall perspective on food and your emotions.

Dr. Winters: I love that because most of us in the world today use food to treat our emotional being, especially if we use carbohydrate, sugary, starchy rich foods. I asked my patients, "What sweetness are you lacking in your life that you have to fuel it with this?" That sometimes gets a little bit of a whoa kind of moment.

But food is medicine. And it's love. And it's a celebration. And it's connection. And so what I try and help folks realize is there are other ways. You can still have a bone broth evening with your girlfriend. Have them come over. Or instead of going out to dinner or going out for cocktails with friends, go for a walk in nature. Go do something else. You start to find other ways to connect and create new ritual and new sweetness to bring in different sweetness from different aspects of your world around you.

Dr. Jockers: Yeah, I love that. I typically fast through dinner when I'm doing my fast. Breakfast and dinner, I usually eat lunch typically unless I'm traveling or something like that. And my wife loves it because dinner is when I'm with my family. And my little boys need a lot of help.

Dr. Winters: So you're present with them!

Dr. Jockers: So I'm like 100% with them, making sure they're eating all of their vegetables. I'm 100% with them, which makes her life a lot easier. So it's better. I'm more focused on whatever we are having a conversation about.

I just had a patient yesterday actually I was talking to about this. And she's like, "well, what do I do? I like to go out with my friends. But I don't always get to pick the restaurant." And I said, "Well, do this. The days you don't get to pick the restaurant, you already know the restaurant they're going to choose and there's just not healthy food on there, that's your fasting day. And you're 100% focused on the conversation and the relationship, not thinking about the food. And then you get a turn at some point to pick the restaurant. And then that's when you get a chance to obviously enjoy the food with them. So it's not like you always have to restrict yourself." But being 100% focused on the conversation, the relationship, that's something we're typically not doing anyway."

Dr. Winters: Exactly.

Dr. Jockers: "And it'll make you a better friend. And I think it will change and shift your life in a positive way." That's what I told her. And she was like, "You know what? That's true."

Dr. Winters: I love that idea. That's a really good idea. And also, I'll tell you, as a woman who's got a really good sisterhood posse around me, you'd be amazed after they have an experience of the way you live your diet or your lifestyle, they'll want to join you on that. They're like, "That feels really good. That's easier than I thought."

And now when I go out, we know exactly where we can "safely" go eat. Or we go to each other's houses, and everyone knows what to bring out. It's so funny now that we are easy with each other. We all recognize that this is good for all of us, not just for me. They all kind of did it to humor me and help me through my process. But they're like, "Well, dang. My Hashimoto's has totally improved. My extra 20 pounds after baby is gone. My brain is working better. My skin is better. My libido," all these different things. They're like, "Could it really be that?" I'm like, "Yeah." So it's pretty cool.

Dr. Jockers: Yeah, it's so powerful. And just getting through the idea that you are being deprived that's so huge. And I know for me that was a big deal. It, to me, fasting seemed so lonely and like I was being deprived. And it was really just a mental/emotional issue. I grew up in a big family with lots of kids. And so it was like I didn't get attention. I had to fight for food. I had to eat my food faster than my brothers and sisters to get more.

And so really, as I started fasting, it really opened me up to emotional growth and spiritual growth in that area. And now it's like my wife or whoever can be eating whatever they want, even a food that is healthy that I love. If I'm in a fasting mode, if I know I'm fasting, it has no impact on me.

Dr. Winters: I love it. That's it exactly, exactly. Especially when you start to actually recognize that you are taking the garbage out every single time you take that break. That's why they call it break-fast. We don't break fast anymore. We are in a constantly overfed and undernourished state in our world around us. And when you can have those little breaks, you start to gain clarity in other aspects of your life, not just literally in the G.I. tract.

Dr. Jockers: Yeah. That is so true. This has been such a great discussion. I could probably talk with you for hours. We can talk all day about this.

But, with that said, what are some final words of inspiration for the listeners? And where can people find out more about you?

Dr. Winters: Well, Definitely *The Metabolic Approach to Cancer* that I co-authored with Jess Kelley is a great start. Also one Facebook, you can follow us under that same title, the book, or optimal terrain, or under my name, Nasha Winters. You can find me there, as well, and follow the type of things I post regarding topics such as this.

Also, as far as a word of wisdom, we are just a living laboratories. You have to be willing to get outside of the conventional box and the conventional misguided wisdom and just try some things on for you. There's a million different ways to fast or to get into ketosis or to become metabolically flexible. Start trying them on for size and see what works for you.

And as I said earlier and a piece I'd like to leave everybody with is you don't have to be perfect at this to gain wonderful insight and gain wonderful benefit.

Dr. Jockers: Love it. Well, there you guys have it. That's Dr. Nasha Winters, amazing *Metabolic Approach to Cancer*. Definitely go out and get that book, especially for those of you that are practitioners or if you have a family history of cancer. Her amazing book, I highly recommend it. Again, it's the best book I've read in 2018. We still have 2 ½ months left. But I think you got it. I think you got the prize. So thank you so much for your contributions.

And for all the listeners out there, I want to remind you of this, that fasting has the ability to unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life. So hopefully you enjoyed this interview.

And if you've been enjoying the content we've been putting out, then I want you to consider owning the entire Fasting Transformation Summit for yourself. That way you get all the bonuses. You get the transcripts. You get the MP3s so you can be listening to these interviews. And that's

going to obviously improve your information load, your education. And it's also going to help empower you.

And I find it especially helpful if you're just getting started with fasting, whether it's intermittent fasting or an extended fast to be listening to interviews like this because it's going to inspire you and help you move through the uncomfotability and really get the results from it. So if you would consider owning this, we would be really honored. And we'll see you on a future interview. Be blessed, everybody!

Fasting and Ketosis Research Highlights

Guest: Dominic D'Agostino, PhD

Dr. Jockers: Welcome, everybody, to the Fasting Transformation Summit where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. I'm your host, Dr. David Jockers.

And today in this interview, we're going to be talking to Dr. Dominic D'Agostino, who's one of the top researchers when it comes to ketones, the ketogenic diet and lifestyle, and really the impact of nutritional ketosis and just this compound ketones that we produce when we're fasting, and how it impacts our brain, our body, and really gives an advantage in life, and in particular in certain disease disorders and health disorders.

And so we're going to be going into some of the research on that. We're also going to be talking to Dom really about how he applies this with all the research that he's done. He's been involved in many different, at this point I imagine, hundreds of clinical trials, well published. So he knows this information as well as anybody on the planet. And he practically applies it. And so we're also going to talk about how he applies it.

And so Dr. Dominic D'Agostino is the associate professor of tenure at University of South Florida. I've been to his lab there. He's doing some great work. He teaches students at Morsani College of Medicine in the department of molecular pharmacology and physiology, with a focus on such topics as neuropharmacology, medical biochemistry, physiology, neuroscience, and neuropharmacology. He's also a research scientist at the Institute for Human and Machine Cognition, to assist with the efforts

towards optimizing the safety, health, and resilience of the war fighter and astronaut.

And so, Dom, welcome to the Fasting Transformation Summit. Been really looking forward to this interview. So thanks so much for being a part of this.

Dominic: Thank you for having me, David. Appreciate it.

Dr. Jockers: Absolutely. I love listening to other interviews that you do because you're just so eloquent. You communicate the impact of ketones, fasting, and really what this whole summit is about as well as anybody that I know. And you really live it.

And on top of that, you're involved every single day in doing the actual research that is changing the way we look at physiology, the way that we are going to be treating a lot of degenerative conditions out there. And I think 10, 20, 30 years from now, people are going to be looking back in major gratitude for the work that you're doing. And I wouldn't be surprised if one day you were nominated for a Nobel Prize. So really appreciate you and your time.

And I'd love to know about how you got involved in this to begin with.

Dominic: Well, thank you for that intro, David. I don't know if the Nobel Prize thing'll ever happen. But I do feel very lucky and fortunate to be able to study something that I could actually implement myself and experience myself.

And really it's a testament to the students and the post docs and the research associates that are working in the lab because they're super passionate about what we're doing. That's how they ended up in my lab actually. And they're really the ones in the trenches at this point generating the data, doing the work, and being very passionate about it.

And I was in their spot, I guess, maybe going back...I've been funded by the Office of Navy Research for about 12 to 13 years now. And I was doing work to understand the cellular and molecular mechanisms of CNS oxygen toxicity seizures.

And I went really from studying cells, neurons—brain cells—to looking at basically cellular mechanisms inside brain slices, which we can keep a slice of, for example, the hippocampus alive for the duration of a day. And that has an intact cytoarchitecture. And we can study the effects of various agents, including ketones, on these brain slices, which we're continuing to do work now.

So I went from cells to brain slices to whole animal rodent model work. Now we're doing large animal work with the military. And now we're doing human studies. And I guess even before cells, mitochondria. So

we go from mitochondria to the cells to brain slices, whole animals, large animals, human studies, and everything in between.

And we are looking at a variety of outcomes in response to...We do pharmacology research. But I would say most of what we do now, 80% or more is metabolism. So altering the metabolic substrates, we think of ketones as sources of energy, but also as powerful signaling molecules. And the outcomes that we look at include things like cytokine profile or reactive oxygen species production. Or in whole animals, we look at EEG levels. We do metabolomic profiling. We do exercise performance. We do behavioral learning and memory tests. We do anxiety tests.

In human subjects, we're actually doing seizure studies. So we actually have various biomarkers that can predict when a seizure is about to happen. And that's called the latency to the seizure response. And we look at that latency with and without the subject being in ketosis. And those studies are going on at Duke University. So they're collaborators with us.

So we're really studying it kind of like across the board for many different aspects, too. And my fundamental or foundational formal training, I guess I would say, was in neuroscience. So that's really what my primary focus is. But we've branched into doing cancer research. We do performance studies. We look at a variety of things outside the neuroscience realm now.

Dr. Jockers: Very cool. And so let's start this interview really with a baseline definition for what are ketones and how does the body use those for energy? And you also said that ketones are signaling molecules. So if you can elaborate more on that, that would be great.

Dominic: Sure. Yeah. Ketones were called byproducts. But I wouldn't use the term "byproducts." They're energy metabolites that are derived from the oxidation of fatty acids that occur in the liver. And when you have accelerated fat oxidation in response to carbohydrate restriction or fasting, the liver breaks down fatty acids at an accelerated rate. And those fatty acids then become subject to a process called ketogenesis.

And the ketone bodies produced are acetoacetate and beta hydroxybutyrate. The liver does not use the ketones as an energy source. They lack the enzymatic machinery to break them down and to use them for energy. They spill into circulation. And then they can provide energy for peripheral tissues, especially the heart and the brain, the brain especially.

And now we know there is a variety of signaling pathways that are potentially impacted by acetoacetate and beta hydroxybutyrate. And these signaling properties could be a receptor for the ketone body. They could be an anti-inflammatory pathway. And they could be a pathway

associated with irregulation of various genes.

So ketones can function as histone methylase inhibitors affecting the methylation patterns that can be really therapeutic for a variety of different disease. One of them we're studying now is called kabuki syndrome. So we have an active project ongoing looking at ketones as an epigenetic regulator. So I'd never thought I would be saying ketones as something that could alter our genetic makeup or pathways.

So they are also what we would call, use the term "anaplerotic." So the metabolism of ketones really assists in accelerating the formation of acetyl-CoA. And acetyl-CoA is feeds into the Krebs cycle or the tricarboxylic acid cycle. And in doing so, especially in the brain, altering that pathway can fundamentally change the neuropharmacology of the brain in a way that is very interesting to me because it also impacts neurotransmitter systems.

For example, there's a proportional increase in GABA to glutamate ratio. So glutamate being potentially excitotoxic in the context of neurodegenerative disease, brain injury, and other pathologies, especially associated with seizures. And there's also an observation that ketones can impact metabolism in the way that it can generate more energy currency in the form of ATP. And this was shown in earlier works looking at the hydrolic efficiency of the heart.

And some elegant biochemistry and metabolism studies were done looking at, for example, the delta G of ATP hydrolysis where we are basically doing studies to look at ATP production per carbon molecule that's going into a system. And it was determined through a series of studies that ketone bodies had a higher delta G of ATP hydrolysis relative to glucose.

So in that way, the interpretation, at least in the heart, the working heart preparation, we would think it would apply to other tissues. But it's a little harder to do this in an isolated, full-brain preparation. It is a more efficient fuel source, one of the most efficient fuel sources that we know of. So being able to induce this endogenously through endogenous production, and also more recently through exogenous supplementation, that is very interesting to me.

And about twelve years ago, I knew that there was a lot of research to be done in this because of some of these observations that were done, actually decades ago.

Dr. Jockers: Yeah, really fascinating, that's for sure. And that glutamate to GABA balance is so key. And when you have this excessive amount of glutamate like you were talking about, it can degenerate the brain. Also, before you develop that brain degeneration, you can develop things like insomnia, anxiety, irritability, things like that when you have too much

excitatory neurotransmitter not balanced by the brakes, which would be the GABA. So I've found that to be really, really powerful.

And I know, for myself, when experiencing ketosis and practicing fasting in order to do that, as well, I just feel like I'm better in every area of my life. I'm less anxious. I'm less irritable and stirred up by stress and things like that. And that has a lot to do with that glutamate to GABA balance like you were talking about.

Now, what are the benefits that we can get? We talked a little bit about it. Can you elaborate more on the benefits that we get from deriving a lot of our cellular energy from ketones?

Dominic: Yeah. You alluded to feeling maybe, what I like to describe, as a calming of the brain on days that I'm doing intermittent fasting. I don't do it every day. But I do it most days. The only days I don't do it is after a day of heavy training. I'll usually have a small breakfast in the morning.

But from the observations from our lab in bird models and now in human studies, looking at things like lowering blood glucose, which I think is really important. There's a decrease when you stay on a ketogenic diet, or you take supplemental ketones over time. Your baseline insulin level will be lower. Triglycerides lower. Markers of inflammation will go down. We track high-sensitivity C-reactive protein.

And these things will actually occur pretty acutely. So within the first week to two weeks, you'll see a pretty big reduction in glucose. Over several weeks, you'll see hemoglobin A1C go down. Triglycerides go down pretty remarkably when you go on a ketogenic diet. And additional benefits may occur after adaptation.

Initially, it may be difficult for some people to transition into a sugar burning metabolism to a fat and ketone metabolism. And there's an adaptation. And various processes have to happen until you can optimally produce, utilize, and transition to a state of nutritional ketosis. And I don't think it's necessarily a state to be in all the time. I generally do. I rarely go out. But I feel at the very least, people should enter that state maybe once or twice a month. And it really facilitates a lot of beneficial processes in the body that you could track with a number of objective biomarkers.

I use a cardiometabolic assay that looks at insulin, hemoglobin A1C, triglycerides, inflammatory markers, cholesterol, and things like that. And it's part of a package that we use for research. So that's what I typically use in our research. In animal models, we can actually pull the tissues out. So that's the benefit of doing animal model work is that we can, for example, take the brain out or brain region out, or the liver out to see how this is affecting the liver health and liver metabolism. We can take the heart out. I have a student that's studying muscle wasting.

So we're looking at anti-catabolic effects of ketones, which is another benefit.

So if you are fasting, many people are trying to lose weight. If you are staying in a state of nutritional ketosis, those ketones will help you spare muscle, especially in the context of adding resistance training to that. So if you want to lose body fat fast, that's where ketosis really shines, I think. Going into a calorie deficit with an elevation of ketones will pay big dividends, not only in how you feel, but also with health biomarkers and retaining muscle.

Dr. Jockers: Yeah, absolutely. I've experienced it. I recently earlier, last month, I did a 4-day fast. And I was going to do a full 5-day fast, water fast. Towards the end of the fourth day, my body was just like, "I've got to go work out." My muscles just were giving me this signal, "Go work out." And so I'm like, "Okay, I'm going to work out. And I'll break my fast after it."

And so I went and I worked out. And at first I was going to go light. And I started doing that. And I increased the weight. And I was just as strong as I was when I was fed. I hadn't eaten in 4 days. And I'm really lean. I'm regularly 8% body fat. And then I came home. And I wasn't even hungry. I ended up having a protein shake that night to re-feed. But I just felt so good, so strong, so resilient. And obviously my ketones were really, really elevated there.

And so I know you have a story, as well, where you did an extended fast then deadlift, didn't you?

Dominic: Yeah. I can relate to that. I think the more you fast, the easier it gets. But the 7-day fast I did a while back now, 4 or 5 years ago, maybe 4 years ago, I did do that. I had quite a bit of [inaudible] at the end on day 7 and then went to the gym with a group of people. I was part of the fitness camp here at the time. And I didn't try to do any personal records in deadlifts. But I did go up to my normal working set weight, which would be like 5 plates on each side. With the collars, it was 500 pounds. And I was able to do that for an easy ten. And then I did 6 plates, which is like 585 after that.

And it didn't feel much different, all that different. I kind of stopped from pushing myself to absolute failure because I thought in an energy-deprived state, which after 7 days, you kind of are. I was feeling very good mental clarity. But at the same time, kind of understood that I was in an energy deficit. So I didn't want to break my body down too much.

But it was a very enlightening experience for me. And I think that our bodies are really hardwired. So if we go several days without fasting and we didn't have robust mental clarity and energy, we would not go on to survive and adapt. So evolution would not select for people that did not

respond well to fasting.

So some people say they just can't do it. And I think they really just have to power through that second and third and fourth day. And then your systems kind of kick in because if we couldn't do this, I don't think we would have been selected.

I know some people, we've had students in the lab before, and a few females, they get to the point where they feel like they're going to faint after 24 or 36 hours, at that point. But I think that's really about hydration and getting your salt in.

And also if we're out and about in nature, in sunlight, exposed to the elements, I think that would be more of a stimulation that would even facilitate that process instead of sitting at a desk. So it's kind of hard to study this. We would likely be foraging for food and resources in a fasted state. And I think being in a fasted state may help that.

A lot of hunters connect with me. And they say, "I've been hunting all my life," bow hunting or whatever, a lot of bow hunters, my brother is a big bow hunter. And they'll go out in a fasted state. And they feel like their visual clarity and their senses are heightened, like they can smell better. They can hear better. They can see better. And these are all things that I kind of realize, too. And looking back having people like hunters contact me, it makes a lot of sense.

Dr. Jockers: Yeah, absolutely. From a survival perspective, it's like, okay, our ancestors didn't have refrigerators and pantries and things like that. They relied on, like you were talking about, finding food along the way, foraging or hunting. And so it was not uncommon for them to go multiple days without food, maybe even a week or two. And like you were saying, they would get stronger and more mentally clear over time because that would allow them to be better at hunting, more effective. And they would find their kill.

There's groups out there like the Spartans from the movie *300*. I had read that they actually would fast throughout the day and then feast at night. So they practiced a form of time-restricted feeding. And they would train really hard in a fasted state. And they felt like it gave them this incredible power. And, of course, they were renowned for their fighting ability. So there's tribes out there that have done that.

And so let's switch into a little bit of time-restricted feeding and extended fasting. And you've talked about how ketones are produced. So how can this be a powerful stimulus for our body to produce ketones?

Dominic: So the state of fasting, yeah. We know that fasting really does mimic the physiological state of starvation or pre-starvation, semi-

starvation. And that's really a stimulus for our body to be active, to really go out and find resources.

So being in this mild fasted state, I'm kind of excluding the 4-day fast and the 7-day fast. So I'm kind of putting it in the context of maybe intermittent fasting where you stop eating between 6:00 and 8:00 the previous day. And your next meal is somewhere around 2:00 in the afternoon or 4:00 in the afternoon the next day.

When you're in the middle of the next day, your insulin sensitivity is going to be higher. You'll likely be running a mild calorie deficit. So the things that we measure in the lab like AMP kinase and mTOR and things like that, they would be a measurement of those in our blood, in our tissues, which suggests that we're running a mild calorie deficit. But if we fed the previous day, we're sort of in a fed but fasted state. Fed meaning we have all the nutrition that we need, but our body is sensing that there's an energy deficit.

So the way I think about it is that you are really amped up to go acquire resources, to actually do some physical activity. And it's in that state where I not only feel that I have the potential to perform physically at my best, but also to perform mentally at my best. And I will specifically adjust my eating patterns like doing intermittent fasting and things like that when I have big projects that I have to work from an academic standpoint. And that could be working on a manuscript, a book chapter, a grant, speaking, teaching, when I have a really heavy teaching schedule. I do it in a mild fasted state that's produced with intermittent fasting.

Dr. Jockers: Yeah, absolutely. And Plato even back, the ancient Greek historian, he has this quote where he says, "I fast for greater mental and physical efficiency." And that's what you're talking about there. You get that better efficiency, better productivity when you're in this fasted state.

And you had touched on this. Having a baseline of ketones or being fat adapted where your body's good at taking fat and using it for fuel beforehand will help you get more out of the fast, although fasting can be the fastest way to get into ketosis outside of using an exogenous ketone or something like that. So they work hand in hand. They work together.

And you and I are getting the benefits of fasting every time we fast because our bodies are fat adapted to using ketones for fuel. So I think that's a key thing to discuss there.

But I know you've also done a lot of research on cancer. You've looked at different forms of cancer. And you've also looked at how ketones affect them. A lot of these cancers are glycolytic. They depend on a steady source of glucose in order to fuel. And ketones are obviously an

alternative fuel source. So I'd love for you to go into more detail on that, and also how to use fasting and fasting strategies with cancer patients if they're undergoing chemotherapy, radiation, and what you've seen with that.

Dominic: Yeah, that's really an emerging topic right now. And we're really in the trenches from the perspective of Basic Research science lab where we have published on a couple model systems so far. Actually, the first model system that I studied was a U-87 glioblastoma cells. And there were studies back in 2005. And we looked at things like hyperbaric oxygen from the context of oxygen toxicity, but we noticed that when brain tumor cells were exposed to high levels of oxygen, they overproduced oxygen free radicals, one of them being superoxide production.

So I did not know why that was happening at the time. And I reached out to different investigators. Although I had the *Biology of Cancer* the book, it didn't really go into the Warburg effect. But I found out that this is a pretty common characteristic of all cells, that they have what some call damaged metabolism or dysfunctional mitochondria.

Maybe stated another way, it's never been observed that cancer cells actually have normal mitochondria. So pretty much most cancer cells have things like immature cardiolipin, which is part of the inner mitochondrial membrane and is really the glue that holds that membrane together. So you see sort of structurally and functionally you see changes in the mitochondria. And some may argue that these changes could benefit the cancer cells because the excess reactive oxygen species that these cancer cells produce allow them to sort of kill off the cells around it and actually enhances their survival in some ways. And it generates the potential for invasiveness and metastasis.

So that's kind of going down the rabbit hole because I was studying redox biochemistry. But the important part here is that the excess oxygen reactive species is associated with their high rates of metabolism and sugar production and glycolysis. And being in a state of nutritional ketosis, obviously it's going to lower glucose availability.

But more importantly, by decreasing the hormone insulin or elevations in insulin in response to feeding by decreasing that, you are impacting so many different metabolic pathways that are under intense investigation by the pharmaceutical industry to target cancer. And that could be the PI3 kinase pathway, the AMP kinase pathway, mTOR, IGF-1. We have a whole white board in our lab with dozens of these pathways that are remarkably impacted simply by shifting the fuel that your body's using.

And, again, of course, you're limiting substrate availability to some extent through glucose. But blood glucose really does not change

from a baseline standpoint all that much. If you're on a ketogenic diet and there's a calorie deficit, you could bring that down about ten to twenty percent. What you do eliminate is those big spikes in glucose that typically accompany a carbohydrate meal. With eating low carb or ketogenic, they're virtually abolished if not significantly attenuated. So you have that effect going on.

So in the context of exogenous ketones, they can be supplemented to further decrease your blood glucose and elevate obviously your ketone levels. And I've demonstrated from early work that we did that in the context of growing cancer cells in the presence of ketones, at least in the brain cancer cells that we studied, I was motivated by some extent from some research that was coming out of the University of Florida by a Dr. Skinner. And he showed that neuroglioma cells and various cell lines that he studied, if he supplied ketones and subtracted glucose that that was damaging to the neurons. So that would decrease survival, but also increase cell death.

So those experiments kind of motivated me to go on and look in other model systems. And I've reached out at the time, maybe 2009 or 2010 to Thomas Seyfried, who was studying brain cancer. So we used a mouse model system that actually showed many of the features of cancer metastasis. And we used that model to look at ketogenic diet and hyperbaric oxygen together.

We've never really studied the ketogenic diet by itself. We always study it in the context of other things, like hyperbaric oxygen with the ketogenic diet, ketone supplementation, the ketogenic diet with ketone supplementation and hyperbaric therapy. So we like to do these combination therapies that are essentially all things that are nontoxic, but they have overlapping mechanisms.

And our vision is to create sort of a comprehensive metabolic-based, therapeutic strategy for individual cancer types based on the phenotype of that particular cancer. For example, does it express the Warburg phenotype? So is it highly glycolytic? Does it express high levels of the GLUT1 transporter or insulin receptors or things like that?

So we're sort of at that stage now. And we're studying a variety of different cancer models. And we're realizing some are very robustly responsive. And some are relatively non-responsive, at least with the therapies that we're working with now.

And we may need to do a baseline metabolic-based therapy to [inaudible] cancer growth, to weaken it for other standard-of-care options because there are some cancers like leukemia, lymphoma, testicular cancer, maybe early breast cancer, other cancers that we know survival can be increased with standard of care therapies. But the kinds of cancers that we really focus on are brain cancers or advanced

metastatic cancers, are not really positively impacted by the current standard of care. So this is very disturbing to us.

So we want to direct our time, energy, and resources to really looking at non-toxic, but aggressive metabolic-based protocols. That will get your glucose ketone index in that 1 to 2 range. For example, get ketones elevated up to 3 millimolars, and get glucose down to 3 millimolars. So that would be a glucose ketone index of 1.

And we know from a neuroscience epilepsy point of view, that's tremendously therapeutic to metabolically manage epilepsy. And we have demonstrated through a variety of different model systems that that can slow cancer growth or actually reduce cancer growth altogether in various model systems. So we're looking at feasible ways to induce and sustain a glucose ketone index of 1 to 2. And then let that be sort of the first line of therapy that people would do. And then we have a number of add-on things, sort of a toolbox of things, that we can add to that.

Dr. Jockers: So a glucose ketone index of 1 to 2 for somebody that's dealing with cancer. Now, somebody that's just wanting to prevent cancer, live a healthy lifestyle, we're looking at like 1 to 1 up to 4 to 1. I've heard you say that before. The 1 to 2, that's going to take something like exogenous ketones or fasting in order to get there. Is that correct?

Dominic: It can be, yeah. I communicate with parents that maybe have kids, for example, that have glucose transporter type 1 deficiency. And they consistently, day in and day out, are maintaining a glucose ketone index of 1, meaning that their glucose and their ketones basically stay between 3 to 5 in millimole per liter all day.

And if their kids get off the ketogenic diet, then they get the symptoms of the disease. But they could largely silence the symptoms of the disease just by staying in that metabolic state. So that's a unique condition. There's actually a number of conditions like that.

With cancer, it's not very evident. If you get out of that state, there's nothing indicating acutely that things are happening in your body, that cancer is growing. So unlike with seizures, when you get out of that state, you can go into a seizure.

So I think it's important to maintain that state as much as possible because we not only know it's limiting glucose availability, but most importantly, it's really turning down many of the drivers of cancer growth, including the ones I mentioned, AMP kinase, mTOR, PI3 kinase pathway, the insulin pathway, too. We know that it has pretty profound impact on that.

And that's really further enhanced with a calorie deficit. So that kind

of brings up the problem. If someone is under weight, it becomes a little more tricky to implement the ketogenic diet and do things like intermittent fasting. And that's where exogenous ketones may come into play because of their anti-catabolic effect, potentially preventing cancer cachexia.

So we're really interested in focusing on the cases that are the hardest. So the cases that are glioblastoma or advanced metastatic cancer when the patient is already underweight, what do you do in that situation? If we can develop things that can actually help in those situations with various model systems—not just one model, we want to work on various model systems and look at the effects—then we know that we're probably making major progress in this area. And we try to focus on things that once we complete the study and publish it, that clinicians can look at that study, oncologists can look at that study and then implement it from there.

We don't want to study some kind of rare drug or thing. We want to study things that could literally be taken off the shelf and implemented by people who are reading the paper. So that's sort of ethically what we focus on.

Dr. Jockers: Yeah, absolutely. And based on your research, what cancers have you seen to be most responsive to metabolic therapy like a ketogenic diet, fasting, use of exogenous ketones?

Dominic: Yeah, that's a good question. We don't really know definitively from a human standpoint. We have a variety of model systems. I could send you a link to publications that look at this question without going into the weeds and mentioning different model systems.

For example, the GL261 glioblastoma model, there's probably about a half dozen different brain tumor models. I think the important thing to recognize is that the more aggressive the cancer, the more evident will be the Warburg effect. So the more aggressive the cancer, the faster it's dividing, the higher the glycolytic activity.

And those cancers are definitely going to be more responsive. No one would argue that they would be more responsive to calorie restriction. These fast-dividing cancers that have a huge appetite for glucose and glutamine and other metabolic substrates. So they would be sort of the most responsive. And if you do a biopsy on these tumors, they would likely express a high rate of insulin receptors. Glucose GLUT1 transporters would be present at a very high density on the cells. And the GLUT3 transporter, too, maybe if it's a neuro type derived brain tumor.

So there are various features. And from an animal in vivo human study perspective, the intensity on a fluorodeoxyglucose PET scan, too, would

indicate the Warburg effect. And right now, it's primarily used to identify the location, to some extent the aggressiveness of the tumor. But that information and information from the biopsy can be used to select patients that we feel...

And maybe the genetic data, too, that's a little more unclear. Maybe a lot more unclear. But I think generally from a phenotypic perspective—not so much a genotypic perspective now, but from a phenotypic perspective—we can pretty much identify the tumors that would be responsive to these metabolic interventions.

Dr. Jockers: And you're talking about using the PET scan. That's where they inject radioactive glucose and kind of watch where it goes. And cancer cells are more metabolically active, like you've been discussing. And so they gobble it up. And so we can see that on that scan. And that's used to kind of detect where the cancer is, in traditional model. But what you're saying is we can use that to determine how glycolytic the tumor is and get an idea of how it would respond to metabolic therapy.

Dominic: Yeah, I think so because we know that glioblastomas typically are highly glycolytic. Various forms of maybe lung cancer, liver cancer, kidney cancer, and things like that are glycolytic. Other more indolent cancers like, let me see, testicular or prostate cancer, they may not show up as bright on a PET scan. So I would not write them off because although their glucose consumption may not be that high, their proliferation rates are low.

But we do know that if you could reduce various drivers of cancer proliferation and growth, like inflammation, IGF1, a number of factors, that you could impact the outcomes in these patients. Getting glucose, bringing your hemoglobin A1C down, reducing HSCR, and impacting biomarkers, there's pretty good evidence that that's going to positively affect the patient. I mean, it's really difficult to quantify that.

So I would say that even cancers that are not hot on a PET scan, I still think it's worth implementing these dietary- and metabolic-based therapies that are really at the cusp of being developed right now. And we know there's a number of drugs out there, like the PI3 kinase inhibitors. It made a big press release on that. These new metabolic-targeting drugs, the most effective ones that are on the shelf right now in clinical trials, are much, much more effective in the context of a ketogenic diet or a diet that reduces insulin signaling.

So that's a huge area of research. And money is going into that. Professor Lewis Cantley, he's actually a speaker at our Metabolic Health Summit that's going to be in L.A. at the end of January and the beginning of February. He's our keynote speaker and will be sort of a mainstream cancer researcher. But his efforts are steered towards primarily drugs, metabolic-based drugs. But he's understood that a dietary approach

can have a huge impact on the efficacy of a drug, in particular these PI3 kinase inhibitor drugs.

Dr. Jockers: That's really interesting. So they're not just using research on how the PI3 kinase inhibitor drugs work and safety and all that kind of stuff. But they're actually now tying that into, "Okay, how does this work when somebody's in nutritional ketosis?" So that's the kind of work that they're doing now.

Dominic: Yeah, exactly because there are some side effects of these drugs that are sort of mitigated like an elevation of insulin and glucose even, that are reduced. There's counter-regulatory mechanisms that are not favorable that occur with these drugs. And the ketogenic diet tends to reduce or mitigate many of the potential metabolic side effects of these drugs, and by doing so, really can unmask the metabolic targeting efficacy of the drug to impact the cancers.

So this is a very exciting area of research because to really move these therapies forward into the clinic, the clinic, I believe, needs to make a profit. And I do believe, in a medical school, in a physiology and pharmacology department, I really do believe that many of these pharmaceuticals that are being developed will ultimately have tremendous benefits, in particular now that they're focusing more on metabolism.

And they didn't do that decades ago. They were only focusing on metabolic-based drugs. These drugs are far less toxic than many of the chemotherapeutic compounds that have been used over the decades. So I'm really excited that nutritional, dietary, perhaps intermittent fasting, can further augment the therapeutic efficacy of these new drugs, and maybe even immune-based therapies, too, that are being studied now.

Dr. Jockers: Yeah. It's really, really fascinating because most drugs are really studied more so in a reductionist manner like, how does it affect this particular tumor at this particular time? But not in a holistic fashion. How does it impact all the systems of the body? And how do we optimize all the systems while utilizing this drug to get the best benefits? So I think that's really powerful that they're doing that research.

Dominic: That's a really good point you bring up. And it makes me think. We try to do more top-down research. We see calorie restriction tends to work for everything. And the ketogenic diet kind of makes calorie restriction feasible. And even you get added benefits even for the same amount of calorie restriction with a ketogenic diet than with a standard diet. So that's very evident in the research that we're doing.

But I did really focus a lot of research from, I guess, what would be

a bottom-up point of view, or reductionist approach, using various reduced-model systems. Like I did perforated patch clamp technique in neurons in my PhD. And it's a super reductionist, pharmacological technique. And you identify something, and then you build a therapy based on some cell studies or mechanistic studies, whereas we try to do the opposite. It's like we basically vet out everything that can work in our whole animal research. And then we go back and look at the mechanism.

But who cares about the mechanism if it's not going to work? Only the drugs have been shelved because of that bottom-up strategy. And not to criticize the National Institutes of Health too much, but that's the kind of research, the mechanistic research that they tend to fund, this very what they think is sexy, elegant work where you mechanistically target a particular pathway, and then build up, just developing a therapy based on that mechanism.

Dr. Jockers: Yeah. That's what I think is so exciting we're starting to see now research coming out that's using more of a holistic idea, holistic understanding. And obviously that's some of the work that you and Dr. Seyfried are doing, as well.

So I know, for example, the traditional model of chemotherapy and radiation, that's the traditional oncological model for treating cancer. And utilizing ketones and fasting can really help that be more effective. And I know for myself, being a doctor who works a lot of different patients, I have a lot of people asking me what I think of chemotherapy, would I do chemotherapy, this and that. And I always let them know, if I was going to do chemotherapy, that's an individual decision. But if I'm doing it, I would go in fasted.

And I know I've heard you talk about that. Can you talk about how that works?

Dominic: Yeah, absolutely. I do think work has been done and is continuing to be done. Dr. Valter Longo, who has the fasting mimicking diet, and that's doing quite well. And that sort of system is being set up so that his profit can feed back into research and further study this effect. It becomes very difficult to fund a study to look at fasting in patients. Like how do you get ethics approval for that? What oncology clinic is going to approve fasting for that?

But what it has shown is that if we do bring down, get those metabolic biomarkers down and in place, especially in regards to the secondary inflammatory effects of some of the therapies, including chemotherapy and radiation, are dramatically reduced. And I talk to these patients, a few of them, in those studies. And some of them just doing it themselves because they can't really find an oncologist that accepts what they're doing. They get little or no side effects when they go through therapy.

And that's really, really important. So I think if that information gets out, that's going to be a tremendous advance forward because we've only had very little incremental steps in improvement of therapies for cancer. And it's been very, very incremental, if at all, for some cancers, not at all.

I think if this was implemented—fasting prior to chemotherapy or radiation—you're going to see almost a step function release from historically since there's hardly been any progress. You're going to see a step function in the outcomes of the patients, definitely in their side effects, but also in their therapeutic response and ultimately the outcome of the therapy.

So I'm really excited to see that research moving forward and that there's a mechanism to fund this with a fasting mimicking diet. I think people themselves can put together their own fasting mimicking diet. But having it together like Valter Longo did...And he was one of our keynote speakers at the Metabolic Health Summit here that we had in Tampa. And it really gave me an appreciation and insight.

And I've also talked to quite a few people who are using it to have it all together in one package like that and essentially just mimicking the effects of fasting to further augment the therapeutic efficacy of the standard of care being used, not as a replacement by any means. We're not advocating standard of care be replaced, but as a means to enhance that therapy.

Then you start to get oncology clinics interested because you tell them, "Hey, we have something that's going to further enhance what you're doing. So your outcomes are going to be improved." So they typically respond to that. And it's a little more feasible to get that into their clinical trials. They're more accepting of it.

Dr. Jockers: Yeah, absolutely. And so basically when we're fasting or on a calorie restricted, low-calorie, ketogenic diet like Valter Longo, like his program has with fasting-mimicking diet, the cancer cells are weaker. And so they're more prone to the oxidative stress, or they're less resistant to oxidative stress therapies. And chemotherapy or radiation comes in and it's just this huge blast of oxidative stress. And in a sense, they're hungrier. So they kind of gobble it up more effectively basically. They pull it out more effectively, so there's less of that oxidative stress that impacts our normal cells. Is that correct?

Dominic: Yeah, that's true. And there does seem to be a much higher absorption, if you want to use that term, or a higher amount of the drug actually reaches the target tissue, which is the tumor, for a number of different reasons. There's an increase in blood flow. There's an increase in upregulation transporter mechanisms.

Also, by limiting glucose availability, you are really turning down,

somebody called it the pentose phosphate pathway, which helps the cancer cells to regenerate, reduce glutathione. So by being in a fasted state, you're crippling the cancer cell's ability to upregulate and sustain endogenous antioxidant pathways, especially those driven by the pentose phosphate pathway to regenerate this reduced glutathione.

And that's really the cancer cells from the last meeting my research associate attended that a lot of mainstream cancer researchers are focusing on now, maybe from a drug perspective. But I think it's really important to know that fasting can almost achieve that above and beyond anything that we know right now. Limiting glucose availability, reducing glycolytic activity can really turn down that pentose phosphate pathway that cripples the cancer cell's ability to protect itself from chemotherapeutic strategies that kill the cancer cells through a redox mechanism of enhancing oxidative stress. So that's something that I'm very interested and passionate about and something that we're researching in the lab.

Now, we do a lot of work with high levels of vitamin C in the context of millimolar concentrations that could be achieved with IV vitamin C. And that drives something called the Fenton reaction. The Fenton reaction can further enhance, especially in cancer, especially in a tumor where there's a lot of [inaudible]. By driving the Fenton reaction, that can exacerbate and accelerate the oxidative stress, almost site specifically in the tumor. So we're sort of focusing on IV vitamin C also as a means to further enhance some of these metabolic-based therapies and standard-of-care therapies.

Dr. Jockers: That was really interesting. Are you noticing any impacts in the models that you're looking at with the IV vitamin C impacting glucose and insulin levels at all?

Dominic: Well, that's an area that's sort of the next frontier of studying. We did a lot of in vitro work, and now we're moving that into a number of cancer trials that are ongoing right now. So we have data, but it's all blinded. So we don't know really what the results are at the moment. But I've been contacted by investigators that are absolutely sure that vitamin C is acting as a glucose antagonist because it uses the same transporter mechanism as glucose. So it may be functioning in that way. My primary interest—I'm interested in that—but also interested in its ability as a prooxidant. A lot of people don't know vitamin C is an antioxidant. But we're using it in the context of being a prooxidant.

Dr. Jockers: Kind of similar to what a chemotherapy...Chemotherapy is a prooxidant.

Dominic: Yes, exactly.

Dr. Jockers: It creates oxidative stress in the body.

Dominic: It creates it. So you pulse it in at a particular time point. For example, you could pulse it in during exposure to high-pressure oxygen, oxygen in the context of what's used clinically. So hyperbaric oxygen therapy, like 2.5 atmospheres of oxygen. That can increase the tissue PO₂ by 2,000 percent.

So reactive oxygen species formation is an oxygen-dependent process. And in a context of high levels of ascorbic acid, which drives the Fenton reaction, you're going to get a super physiological synergistic elevation of reactive oxygen species, especially in the tissue with a high amount of free heme, which you'll find that in tumor tissue. So we are sort of putting together compounds, which are essentially nontoxic, at least in the range. Oxygen is toxic. Vitamin C could be toxic.

But we're really studying them in the context of doses that are nontoxic. But when they're combined together, they can more or less cite specifically elevate reactive oxygen species and oxidative stress to stimulate apoptotic or necrotic pathways in the tumor. And that could be done together sort of at the standalone comprehensive therapy, or in the context augmenting standard of care therapies.

Dr. Jockers: Yeah. And by a pro-oxidant therapy, IV vitamin C and hyperbaric oxygen are supportive and healthy for normal tissue, correct?

Dominic: Yes.

Dr. Jockers: Normal tissue, they depend on oxygen for aerobic respiration. But the cancer cell is anaerobic. So oxygen is toxic to it. Is that correct?

Dominic: Yeah. Yeah. And one of the FDA-approved applications for hyperbaric oxygen therapy is actually things like radiation necrosis. So helping people recovering from the standard of care therapy, I've been to a number of different conference, the ones that are probably most high profile are the Undersea & Hyperbaric Medicine Society meetings where doctors will show results from the patients one slide after another: "Here is the radiation damage. And here is the enhancement of the repair of the tissue," so enhancing the normal tissue's ability to heal itself with high pressure oxygen.

So radiation necrosis, yeah, vitamin C can help normal cells. It can also be a pro-oxidant. But it's more of a pro-oxidant in the tumor tissue that already has accelerated rates of reactive oxygen species, and also free heme that's in it—

Dr. Jockers: Yeah, interesting.

Dominic: —Yeah, mechanistically delving into this. But like I said, we're doing the trials right now in different model systems. We're looking at a

breast tumor, a breast cancer tumor. I want to look at a variety of model systems to really determine what works and what does not work.

And we think it's equally important to actually publish data from model systems where it does not work. And I'm pretty passionate about that because we want to identify and let patients know that if it doesn't work for this particular tumor type, then that's really important to know, too. So we're doing a number of trials to just figure out what works and what does not work.

Dr. Jockers: Well, I think that's really good, honest science. And you're creating a whole framework for how to use metabolic therapy, which needs to be done.

And so going in to, let's say, somebody's listening and they're about to go through chemotherapy or they're already doing it. How would you recommend they approach fasting beforehand? Let's say they have a chemotherapy treatment at 10am tomorrow or something like that. What would be a good strategy for implementing a fast before that?

Dominic: Yeah. I would tell them to work very closely with their oncologist because every therapeutic strategy is going to be different. And I don't know. There may be the potential for hypoglycemia in patients if they cannot readily achieve ketosis.

For example, if they have heavy liver metastases, they may not be able to sufficiently elevate ketone production. And in the context of low blood glucose, that could be sort of a dangerous situation. So I don't like to give blanket recommendations. From what I know and from what we see in the lab, I think a 24-hour fast prior to chemo, so stopping your meal at 10am the next day and fasting for 24 hours to ideally achieve that 1 to 2 glucose ketone index. So if they're eating low carb already, they could probably achieve that, especially with using maybe something like a ketone supplement or medium chain triglyceride oil. There's things like that.

Interestingly, MCTs are very versatile compounds for nutrition. They're fats. But they're transported directly to the liver and not through chylomicrons. And they tend to have a glucose-lowering effect by themselves. So there's MCT oil out there. There's MCT powders. There's ketone mineral salts that are available. Ideally a compound that kind of combines them both together is what I personally use and has a pretty remarkable effect at elevating ketones into that mild range, but also lowering blood glucose.

And I think those strategies could be implemented. Small amounts of these compounds can help you achieve those biomarkers that we know would make you more responsive to the therapies.

Dr. Jockers: Yeah. So using exogenous ketones with MCT is going to help, obviously, your body. It's going to provide more ketones for your system, which can help stave off hypoglycemia or the negative effects of low blood sugar, which can help you prolong a fast.

Dominic: Yeah, and make you resilient. Keep your energy levels up, I think that's really important for the patient. And also in the context of animal model systems, achieving that glucose ketone index of 1 to 2, and there's some patient data emerging that keeping that glucose ketone index as low as possible will be beneficial from a variety of perspectives from lowering your side effects to enhancing your outcome. And I think that that's really important to do that.

But I would also recommend working closely with your oncologist, working closely with your doctor that has an understanding of this approach. There's some oncologists out there who just don't think nutrition is worth looking into at all. They don't really feel that nutrition can have any effect on the patient. And I've come across that. It's hard to imagine that.

But I do think that sometimes the ketogenic diet...And as a ketogenic researcher, I will say that some people overinterpret my data or overinterpret...There's dozens of ketogenic diet researchers out there right now that are studying cancer that they may overinterpret the data and kind of oversell it in a way that [implies], "Don't do chemotherapy. Do this." And that can be very dangerous. So we need to really proceed very cautiously when implementing this, but with also not overselling it as a strategy.

And it's just, like I said, we never do just a ketogenic diet-only study. We do it in the context of other things. But I do believe personally that nutrition fundamentally is one of the most important factors that can impact response to therapy, but also just a general outcome for the patient. So that needs to be prioritized from my understanding. And patients need to seek out practitioners or oncologists that are accepting of the fact that nutrition can have a very, very profound effect on their treatment.

Dr. Jockers: Yeah, for sure. And so I wanted to ask you a little bit about exogenous ketones because I know you're an expert in that. And so I've heard you talk about using exogenous ketones—and you mentioned a little bit—with MCT, like an MCT oil powder and getting the exogenous ketones in salt form so you're getting electrolytes, as well, which is necessary when you're fasting or when you're basically driving down insulin levels. You need extra electrolytes. So these exogenous ketones come in salt forms, magnesium, sodium, potassium, calcium, different things like that.

So what would you say would be the best practices when you're looking

for an exogenous ketone product, and how to use it properly?

Dominic: Yeah, I think time will tell. There's a lot of studies going on right now. Researchers are reaching out to me. It's good because they're in no way affiliated with any company or they're not even affiliated with any researchers. They study something else. But they are taking off-the-shelf products and applying it to athletes, to people with type 2 diabetes.

So this research is in progress. Our company is interested in potentially coming out with a product. We have various patents, or the University of South Florida. I don't own them. But the University of South Florida has patents on various applications like lowering blood glucose, anti-anxiety, mental effects, even physical performance, things like that.

So from what I can tell from a therapeutic perspective, as I mentioned, using exogenous ketones, particularly in the form of a ketone mineral salt that's balanced so you're spreading beta hydroxybutyrate across monovalent and divalent cations that you mentioned: sodium, potassium, calcium, magnesium. That would allow the individual to tolerate a higher dose of beta hydroxybutyrate and to have a more favorable electrolyte delivery. And taking that ketone salt and combining it with medium chain triglyceride powder would probably be most palatable and tolerable.

And consuming that to get your levels up to the 1 millimolar range, maybe upwards of 2, so that mild state of ketosis will undoubtedly elevate beta hydroxybutyrate to a level that becomes a significant source of energy for your brain and your heart and your peripheral tissues. So you will get an energetic advantage by doing that. And you also tend to get a lowering of blood glucose with a dose that elevates ketones into that 1 millimolar to 2 millimolar range.

And we think that the studies need to indicate this. But there may be a cognitive and maybe a physical performance advantage. But time will tell. My research is really focused on looking at these things in the context of an extreme environment. For example, high pressure oxygen, a navy seal would be exposed to. Or in a hypoxic environment on top of Everest or something like that.

So where the individual is already put at a deficit and they're put at a cognitive and physical deficit, and you establish a supplementation protocol like ketones. It could be creatine. It could be other amino acids or whatever, to help them get back to their baseline levels. So what we'd call performance resilience, which is typically my focus.

And I can say pretty much without a doubt that from CNS oxygen toxicity perspective, there's a big performance resilience. If you're not having a seizure, you have higher performance in that context. So from military personnel, if they're in a state of nutritional ketosis, from their

perspective, exogenous ketones are the way to go, although there may be some interest in the diet. But something that could get there quick and sustain it, that's going to give them the neurological resilience to actually safely achieve their mission.

Dr. Jockers: Yeah, that's such a powerful word, *resilience*, because we're all under stress in our life. And, of course, what you're looking at is extraordinary stress. And I think every one of us would love a little boost in our ability to adapt to the stressors in our life. And that's what you're looking at with this research.

Dominic: Yeah, you've seen our chambers, I think. So you've seen our lab. And we have these environmental chambers where we can really make the environment very, very extreme and put it anywhere, put oxygen or pressure anywhere we want to go. And in that context, that's where nutritional ketosis really, really does shine. It really helps the brain maintain energetic functions and cognitive resilience just by simply maintaining these neurotransmitter systems and ATP production in the brain.

So we're doing some metabolomic work and doing some work. And going back,

after we've identified that it does have an effect, we're now looking at individual brain slices and to determine mechanistically why it's having that effect.

Dr. Jockers: Yeah, really interesting. Really looking forward to seeing more and more research you guys are putting out with that.

Now let's go into just how you practice personally intermittent fasting on a regular basis. What's your schedule with that? I know you said you did a heavy training day yesterday, so you ate breakfast this morning. But that's not what you consistently do. So on a weekly schedule, what do you do with fasting?

Dominic: Yeah, it varies quite a bit because I do a lot of traveling. But generally speaking, I try to get to the gym to, say, move heavy weight. I would say twice a week if I'm lucky. Sometimes I'll go a week or more without it. Sometimes I'll be in there 3 or 4 times a week.

But generally what I do, if it's a heavy training day, the next day...I don't really eat a heavy meal after training because I just don't feel like it. I'll just eat a normal regular meal. But the next morning, instead of intermittent fasting, I'll typically have a small ketogenic meal. Like this meal, it was some ground beef through Butcher Box. They have great grass-fed meat. And 2 or 3 eggs. And I will not eat my next meal until after work typically, or at the end of the work day. So I'll probably go about 6 or 8 hours before I eat the next meal. I typically stay ketogenic,

though.

But on an intermittent fasting day, I'll have my last meal 7pm, and then maybe snack a little bit until 9pm. And then I won't eat again until the next day, probably 3 o'clock in the afternoon. So that's about 16 hours of fasting. And my first meal may be a ketone supplement.

Or typically what I do, I have so many products that people send me. So what I do is in that fasted or semi-fasted state, I will get some baseline measurements, consume the meal or the ketogenic cookie or brownie or whatever I have testing that day. And I will make a measurement at time 0, 30 minutes, 60 minutes, 90 minutes, 120, 180, 240. So I have a notebook full of things that I've tested.

And some of these things I actually put on the blog, the KetoNutrition.org blog. One interestingly was not a ketogenic food, but the Quest Nutrition [inaudible]. We're not funded by Quest or anything. We went out and bought the cookies at Target actually. But that's an example. So I have a lot of products. I would say for your listeners, keep an eye on the KetoNutrition.org blog. And we're trying to get a product up every month that we've tested, not just myself, but women. I think it's important to get a couple women and a couple guys in to look at the effects of that.

Dr. Jockers: Covers different demographics.

Dominic: On days I do intermittent fasting, there are actually days that are more appropriate for me to do these N of 1 testing of products on the market. And it's interesting to see these products because they didn't exist ten years ago. And that was a limitation for people. They just thought, *Well, I can't eat cookies. I can't eat brownies. I can't eat things.*

And not that all the cookies and brownies out there are legit. I would say maybe about 20% of them are legit. But I think the market is going in that direction where entrepreneurs and the ones that do their research are coming out with some products that really allow people to sustain a ketogenic diet.

Dr. Jockers: I was interested to know how you are responding, you and the different test subjects. I guess some of your students are responding to different sweeteners like stevia and monk fruit and erythritol. Are you noticing consistent blood glucose balancing effect with those? Or are some people seeing a rise?

Dominic: Yeah, Allulose, too, I think, is used. So I try to generally wean myself off of sweet things. I did...Actually today I forgot. I didn't. I usually put literally a pinch of stevia. I have an organic stevia that I use in my coffee in the morning. I make a liter of coffee, and that's all I have for the day. But I drink it slow. So that's what I typically do.

Some of the products out there that I'm testing have erythritol. And I think that I get a bloating if I have too much erythritol.

Dr. Jockers: I do, too.

Dominic: So I don't like that. Our company does not have a product yet. We're still in the R&D phase. But one thing I will not put in my own product would be erythritol. Or if I do, it'd be a very, very small amount. But typically I do think stevia in a small amount is good and can be okay. But then again, you have that aftertaste. So some people just don't like it.

Allulose is pretty impressive. We don't study it that much. But I know I've tested it on myself. And my student who is type I diabetic, Andrew Kutnik, we've done it with him, with his continuous glucose monitor. And it's very, very non-glycemic.

Xylitol, too much xylitol can give me some GI discomfort. So I try to stay away from the sugar alcohols. Or if I consume them, or if a product that I'm testing has them in it, if they're keto cookies for example, I won't eat any more than 2. So I limit it to 1 or 2. I won't eat like 4. Most of these things that are coming out in the low carb keto community, I think, are oversweetened anyway.

Dr. Jockers: Have you tried monk fruit?

Dominic: Yeah. I think that's a pretty good one. I think monk fruit is out there. I have it somewhere around my lab. But I have to get the pure form and actually dose it, 2 grams, 5 grams, 10 grams by itself for me to get an opinion of it.

Dr. Jockers: That makes sense.

Dominic: But it's incorporated in some of the things that I'm studying. And I seem to tolerate it well. And of the things that are out there, I think it's pretty good.

Dr. Jockers: And you've probably taken exogenous ketones that were flavored with stevia and monk fruit or stevia or monk fruit. Because I know there's a lot that are out there with that. And you still notice a good response with those.

Dominic: I do, yeah.

Dr. Jockers: Yep, good.

Dominic: I think that's a good direction.

Dr. Jockers: Good because it's somewhat controversial. I'm a big fan of using those sweeteners. Obviously, in moderation. But there are

some people in the community that will say, "Hey, this could spike the blood sugar." And obviously everybody's unique. They've got their own individual reaction. But I wanted to see what your response was.

Dominic: Yeah. And things like the main sweeteners, the sucralose and saccharin and aspartame, things like that, I'm kind of on the fence. Occasionally I'll consume a product that has it in it.

But for some of our studies we do in a lab, to sweeten things, if it's a ketone ester like we have to sweeten it or else the mice and the rats won't [eat it]. The sweetener that we use is actually saccharin. Saccharin is very, very potent. And if you get it in the undiluted form, like 0.1...I have to look at the gram amounts. But it's just like a few milligrams per the food, if we mix it up for a [inaudible]. So it's very, very small relative to some of the other sweeteners.

And a lot of people ask me about, "Does it disrupt the gut microbiome?" And this and that. Relatively speaking, I don't think it's...Things like alcohol and various plant-based things or other things that we're eating, I think, have a greater potential to disrupt our gut microbiome unless we're consuming these things in very high amounts.

Dr. Jockers: Yeah, makes sense. Well, this has been a great interview, Dom. I really appreciate your time. Any final words of inspiration for the listeners? And where can they find out more about you? I know you mentioned your website KetoNutrition.org. Are you on social media or anything like that, as well?

Dominic: Yeah, absolutely. So Facebook, twitter, and Instagram, quite a few followers. I should be easy to find on that if you Google my name and those terms should come up.

KetoNutrition.org is sort of the one-stop shop. So you'll find links to my social media on there. And also I'd like to mention The Metabolic Health Summit, which is a conference that's really comprehensive. It has medical education credits for medical doctors. Also registered dietitians will be able to get credits for that. It's heavily focused on medical research, basic science research, but also for the everyday person that wants to come there, too. So it's not strictly an academic conference. There's going to be influencers there. There's going to be entertainment there. Most of the famous podcasters are going to be there, too, that I've sort of done some work with. So I think there's going to be something for everybody there.

But most importantly, it's a synergism of all the top researchers who are publishing presenting their data, and provides a platform for the audience to ask questions and various panel discussions. And many of the people who are contributing in a big way to this community will be presenting. And Dr. Lewis Cantley will be there. He's a pioneer. And

he will definitely be up for a Nobel Prize for his work that he's doing on cancer biology. He will be there, too, as a keynote speaker.

Dr. Jockers: Well, that's great. Thanks so much again, Dom, for your time.

This has been a wonderful interview. And for those of you guys that are listening, I want to leave you with this last thought that fasting and ketosis and the things we talked about, this really can unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life.

So hopefully you got a lot of value out of today's interview. And if you did, I want you to really consider owning the entire Fasting Transformation Summit for yourself. That way you get unlimited access, lifetime access to the mp3s, the audio files, the transcripts, all these interviews and all the bonuses that you can leverage at any time.

And I find that it's extremely helpful, especially if you are starting a fast or you're going to do an extended fast, listening to interviews like this can give you so much momentum and inspiration and encouragement and really help you go the distance and meet the goals that you have. So if you would consider owning it, we would be really honored. And we'll see you on a future interview. Be blessed!

Fasting and Cancer

Guest: Ty Bollinger

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. I know you've heard about it. You've probably heard people doing it. Some are scared of it. Some are jumping in. We're going to go through, really, in this summit exactly how to do fasting right and all the benefits that you can get from it and really who's a candidate for this.

And so I'm really excited about today's interview. And this is with Ty Bollinger who's a great friend of mine and a pioneer when it comes to cancer. And we're going to dive into this topic of fasting for cancer.

And so if you don't know me, if you haven't listened to any other interviews, I'm Dr. David Jockers. And I'm just really excited about this topic.

And so Ty Bollinger. You'll know him from his bestselling books. So *Cancer: Step Outside the Box*, as well as *The Truth about Cancer* and the documentary series *Truth about Cancer* and *Truth about Vaccines*. And so Ty, welcome to the Fasting Transformation Summit.

Ty Bollinger: Dr. J, thanks for having me on today, my friend. As always, a pleasure to talk to you. We're going to have some fun on this subject.

Dr. Jockers: Yeah, absolutely. And so tell us your story. A lot of people that we're interviewing are either researchers or natural health experts. But you got into this really through a family tragedy. Can you tell our

audience really how you got started with your natural health walk and just your passion for helping people understand the truth about health and healing?

Ty: Sure, it started a long time ago. It's hard to believe that it was a little over 22 years ago now that we got started down the rabbit hole of researching cancer treatments and beginning to share with people that they have options if they're diagnosed with cancer which has become our life's mission.

But it all started with my father in July of 1996, only six months after Charlene and I were married. We were newlyweds, six months married. We go to Mom and Dad's house. Dad doubles over in pain. He was 52. I'm 50 right now as I stand before you. So he was two years older than me. He doubles over in pain. We take him to the hospital. They think it's gallstones. Four hours later, they come out. And the doctor is in tears. He says, "It's cancer. It's so advanced. And he's so young." And at that point, my mother collapsed. And 25 days later, we lost Dad. He died within 25 days of diagnosis.

We see now in retrospect that he actually didn't die of cancer. His prognosis was two years initially. He died in 25 days because they botched the surgery, and he bled to death. So he was actually an iatrogenic death, which is a death caused by medicine.

But that was the first of many loved ones that we lost to cancer. And in 2004, I lost my mother. And in between, six other family members. So that's when we began to put this information that we'd been researching since Dad got sick. We'd been learning about natural treatments for cancer. We'd been learning that actually using nutrition to heal is not a foreign concept. It actually works, that there are thousands of documented cases of people who have healed from diseases because they changed their nutrition and may have even included fasting. And we can get to that.

We put that into a book form. And we sold our first book in August of 2006. It was called *Cancer: Step Outside the Box*. Never dreamed that we would be doing this full time 12 years later. But that's where God has us. And we're happy to be here to spread the truth that cancer doesn't have to be a death sentence.

And after 2006, we published a lot more books, about another half dozen books. And then finally started *The Truth about Cancer* in 2014, doing the documentary series that many people have seen now.

Dr. Jockers: Yeah, what a journey! And I remember years ago when you sent me the *Cancer: Step Outside the Box* book. You sent that to me. And I was just blown away with the level of depth of research that you went

through in that. And coming from a CPA, you weren't really in the health space. But you dug into the research based on what happened with your father and what you were seeing going on with your family.

And so let's start with the role that nutrition does play in cancer formation. Let's talk about that.

Ty: Well, many of the experts that I interviewed on *The Truth about Cancer* series said almost verbatim that if you're eating proper nutrition, if you're getting proper nutrition and it's causing your immune function to work the way it should, it's impossible to get cancer. That's how big a role that nutrition can play in cancer formation.

I believe, and many of the experts and, I think, you, believe that cancer is the result of two things. It's a deficiency coupled with overburden of toxicity. What is that? Deficiency of nutrition—we're not eating proper foods, or we're eating things that are actually toxic—that's the other side of the coin—that are making us sick. The toxicities are compromising the immune system. And then we're not able to function the way that we're supposed to, that God made us to heal.

It's interesting. But I really believe this. And this might sound funny from a guy who's done documentaries called *The Quest for the Cures*. But I don't think that there are any cures for cancer. And here's what I mean by that. Somebody's going to cut that and put that out on the internet and say, "Hey, I don't believe there are any cures for cancer."

What I mean by that is that God has made us to where we are the cure. Our bodies are what do the healing. Now, God has made hundreds if not thousands of herbs and roots and vegetables that have anti-cancer effects that allow our bodies to go in and attack the cancer. And they'll help us with the healing. But overall, we get well because our bodies do the healing. We give the proper nutrition. And it runs the way God made it to. And God made us to be healthy.

So I think the real cure to cancer is you making sure that you're getting proper nutrition, that you're detoxifying properly so that your immune function is not compromised. And that's when cancer can get a foothold.

Dr. Jockers: Yeah, I totally agree. So why is this not taught? Why are mainstream oncologists and mainstream media not telling people more about this?

Ty: Largely because they don't know. Now, many of them do know. And it's not popular to talk about nutrition. But most doctors, I believe, really go through medical school with good hearts, good intentions. They want to heal. They want to see people get better. It's what they do. That's their life. And they have good intentions in large part.

The problem is that even if you're a genius doctor, you don't know what you're not taught. You don't know what you don't know. And so what happened over 100 years ago in 1910 was called the Flexner Report where the medical school education was basically co-opted in the United States to push drugs. And if you want to go into depth in the Flexner, we can. But we probably want to focus on other things.

But you can do a Google search for the Flexner report. And you can read about the way that the American Medical Association basically made medical schools who were pushing drugs—drug-intensive were the schools that got the funding from the big donors like the Carnegies and the Rockefellers.

And as a result, 100+ years later, the only medical schools that are left are the ones that got the funding back in 1910. And the schools that got the funding were the ones that were pushing drugs. And the homeopaths and the chiropractors and the naturopaths and all of the herbalists and all these things that we now might look at as “quackery”—because we've been conditioned to think that's quackery even though that is real medicine. That's ancient medicine. But we've been conditioned to think it's quackery. This all goes back to the American Medical Association in 1910.

And that's why doctors don't know because they're not taught it in medical school because medical schools really, when it comes to cancer—and not necessarily a lot of other stuff like trauma medicine and brain transplants and all the things that we're able to do that are really amazing with modern medicine today. I'm not anti-medicine or anti-doctor.

But when it comes to cancer, we're in the Dark Ages. We're pushing drugs. We're pushing chemical drugs to try to heal someone who's already sick! And the drugs are toxins. So why would you try to make somebody sick by pushing a poison? It just doesn't make any logical sense to me.

Dr. Jockers: Yeah, for sure.

Ty: I'm sorry. Why would you try to make somebody who's already sick well by pushing poison? I think I said that incorrectly.

Dr. Jockers: Yeah, yeah, absolutely. It really doesn't make logical sense. In an acute crisis, could it potentially add some years to somebody's life or buy them some more time? For sure. But it doesn't actually move them close to health. I think that's the big thing that you're talking about here.

Ty: Let me jump in really quickly. I just got back from Asia. I was there

for a month, filming for our next documentary to release in April 2019. *The Asian Quests*, I think we're going to call it. Something to that effect.

Gosh! I'd have to say over a dozen doctors told me just in a sarcastic manner like, "I can't imagine why medical doctors are pushing so many drugs! We're not sick because we're drug deficient." It was just something that was very common among the holistic practitioners in Asia. They would say something to that effect. "We're not sick because we lack drugs. We're sick because we lack nutrients." Drugs don't heal a sick body. And so it's common knowledge over there that pushing drugs to heal sickness really is kind of wacky.

Dr. Jockers: Yeah, it's a core thought with traditional Chinese medicine. And that's pretty much what dominates Asia, although unfortunately the Western medicine has gotten in for good, for positive and also for negative as well over there, too. So I'm glad you did that. And I'm looking forward to seeing that documentary series for sure.

So talking about how nutrients play a role in helping prevent cancer, how about fasting? How about really just taking everything away? What role does fasting play in reducing cancer formation and potentially helping somebody healing cancer?

Ty: I think fasting plays a huge role oftentimes. Not everybody incorporates it into their protocol. I did interview a lady in Tokyo that was diagnosed with a really aggressive type of thyroid cancer. She did do chemotherapy. But the doctor said, "Nobody lives through this. We can do you the chemo. And we can put another month or two of life on you. But nobody is going to make this." And so she did the chemo.

But then they tried to get her to go on this high calorie diet which she said was just counterintuitive to her because she said, "I feel like my body is sick because I'm putting too much sugar and things that feed cancer into my body." She did a 12-day water fast, which is antithetical to what the doctors told her to do. She's alive two years later to tell her story. And I think she lived because she fasted.

So what did she do? She removed the fuel from the cancer. Cancer cells ferment sugar to produce energy. That's well known. They're anaerobic. And that's the way they produce energy. Without oxygen, they ferment sugar. So if you remove the source of energy, maybe you've got a chance to kill the cancer cells because they can't produce energy anymore whereas normal cells that aren't cancerous are really good at using ketone bodies to produce energy. And ketone bodies are what we start producing when we stop eating sugar.

So if you fast, by definition, you're going to start producing ketone bodies for energy. And your normal cells run really efficiently on ketone

bodies. And cancer cells don't. So if you take away all the food, you fast, cancer cells are going to die because there's no sugar. And the rest of your cells, you can live a long time without food.

Our good friend, Dr. Edward Group, did an 18-day water only fast earlier this year. And Ed didn't have a lot of fat to start with. But he was a thin guy, a slender guy like yourself, Dr. J. He went 18 days with no food, just water. And he did just fine. We can live a long time without food because our bodies start converting the fat to energy.

Dr. Jockers: Yeah, it's pretty remarkable what the body does and how it increases its energy efficiency, its metabolic flexibility. And yeah, Dr. Group is one of our interviews. And he's talking about water fasting, extended water fasting. And you're right. The guy is probably 8 to 10% body fat normally. And this is well fed. And then he fasts, and his body is still good, even though he is so lean, at actually taking that fat and breaking it down and producing the fuel.

And so from my experience basically we know that viruses—you know viruses can play a role as well with cancer. And so autophagy or basically when we fast, the body has to get fuel somewhere. So it'll break down fat cells like you were talking about, produce ketones. And then it needs amino acids, things like that. So it'll start to break down these old decaying cells. And sometimes, it'll go after these cells that are infected by viruses. And so it can be a way to help reduce viral infections. And that could be a stimulus as well for cancer.

And a big thing that a lot of people with cancer are concerned about when it comes to fasting is many of them are dealing with cachexia where they're losing all this weight. And so they're given things like Ensure and told, "Hey, you need to boost up your calories. Consume more fuel. Consume more of these things."

Ty: Which is like 50% sugar.

Dr. Jockers: Exactly. If you look at the ingredients, it's like corn maltodextrin, sugar, and GMOs. And basically, that's pretty much what they're giving them the whole time. And so basically, what are your thoughts on somebody who is concerned about fasting because they're already losing weight with cancer? What are your thoughts on strategies that they can apply as they go into fasting?

Ty: For somebody who is already losing weight, what I would recommend—and even though I'm not a doctor. I'm not supposed to recommend. If it were me—I can say—what I would try to do is I wouldn't do a water fast. You're going to need calories as you're losing weight. What I would begin to do would be more of an intermittent fasting which gives your body time each day to deal with the toxic debris,

to cleanse on a daily basis. And then have a concentrated period, maybe four to six hours each day that you get the bulk of your calories.

And what I would do personally is go completely ketogenic. I'd go clean ketogenic, not like 10 pounds of meat a day. But a lot of avocados, a lot of coconut oil, even though you've seen the article the Harvard professor talked about how toxic coconut oil was and how poisonous it was. She's clueless. It's very healthy. It's great for a ketogenic diet.

Avocados, coconut oil, real butter. I'd try to get high quality fats, middle of the road on the proteins. Make sure it's very clean proteins. And the low carb. I would follow the ketogenic diet for four hours, five hours a day. And get some substantial calories in during that time because then you have a 20-hour period, 19-hour period that you're not eating.

I think that combination—I know it works because I've interviewed 100s of cancer patients who have done that. And I know it has worked for them. That would be what I would do personally.

Dr. Jockers: Yeah, I totally agree with that. And so you get the best of both worlds. Your body gets more sensitive to insulin when you do that extended fast. You also boost up some human growth hormone which is great for the immune system, great for muscle development, preserving lean body tissue. But then you do get the calories in there, too. And so you get the calories that your body needs, the raw materials that it needs. So I think that's a great strategy.

Ty: I think also, too, it gives people light at the end of the tunnel. If you say to somebody, "Look. I need you to do a 21-day water-only fast," they're going to be like, "I can't do it."

If you tell them, "I need you to do four days water-only fast," they're going to say, "I can't do it probably." If you tell them, "I need you to do a two-week fast where all you do is drink juice," they're going to say, "I don't know if I can do that for two weeks."

But if you tell them, "I need you to only eat between a four and five hour period, water the rest of the time. If you want to have a little bit of tea or whatever, something like that. No sugar. No calories really. That's okay. But during that four or five hour period of time, you can consume 1200 calories if you want to as long as they're clean. And they can be tasty—avocado and meat and eggs." They'll be like, "Okay. I can do that."

Your average person can do that. It takes some discipline. But you can do that. And it's achievable. So I think that's one of the reasons that that's a good recommendation—people can do that. And they can look forward to those big couple of meals they're going to be able to have in just a few hours. And it's not like, "Ugh, I've got two weeks of this. I can't do it."

Dr. Jockers: Yeah, compliance is key. And so absolutely, giving them something that they can tackle and say, "You know what? I can rearrange my lifestyle in order to do this," is huge.

And so I know you touched on toxicity and toxicity's role in cancer development. So we know fasting is a great way to help the body detox whether it's through intermittent fasting, juice fasting, whether it's through strategies like getting in ketosis can help the body to detox.

And so why is toxicity such a big factor today in causing cancer? And what do you typically recommend as far as helping somebody go through a detoxification process?

Ty: I think toxicity is a problem for several issues. Number one, it impairs the immune system. We just know that toxins impair immunity. That's a given.

Toxicity also burdens the organs to where they don't function the way that they should. So let's look at the organs of our body as if they were the bathrooms in our house. And so the liver is the downstairs bathroom. And the kidneys are the upstairs bathroom. We have all these bathrooms in the house. And they're all clogged. Well, it's not going to be long before the house is a mess because the organs that are supposed to be detoxifying the waste from the house are clogged up.

And so we look at toxins that way. We look at a lot of the poisons that are in our food, the pesticides, the effect that they have on our organs in our body. Our organs are toxic. I don't know that any medical doctor would disagree that we're toxic. I think the disagreement is, "Well, can you really detoxify a toxic body?" But everybody knows we're toxic. We're exposed to so much.

So I think the issue with the toxicity is that it impairs the immune system. It clogs up the organs. And it makes the fluids in our body sluggish. Our kidneys aren't pumping the way that they should. Our liver is not excreting the bile the way that it should. Our lymph system is not pumping the way that it should. I think that's a big one with toxicity because people don't understand that the lymphatic system is so important in cancer prevention.

So we have the bloodstream, the blood system. And our blood is going to get pumped whether we like it or not. As long as that heart is beating, our blood is getting pumped. So it doesn't require any effort on your part. You don't have to go to bed at night and say, "I hope my heart keeps pumping the blood." It's going to do it. That's the way God made us. But lymph system is different. And if you don't take an active role in your health and do something on a daily or every other day basis to stimulate your lymphatic flow, your body is going to be pretty toxic.

Remember the old cowboy movies out in the desert. They get to a hole of water, and it's all stagnant. And they're like, "Don't drink that water." As thirsty as they were, they're not going to drink the water. Why? Because it's stagnant. And when our lymphatic system gets stagnant, we get toxic.

And the lymphatic system is one of our detoxification systems in our body. So if you're not moving—and my favorite exercise is the rebounder, a little mini trampoline, just 10 minutes a day, 15 minutes a day. Watch your TV program. Watch the news. Watch a sports program whatever. And just jump. I have one in my gym here in my house. And I'll jump 15 minutes on the rebounder before I start my workout. Why? Because that up and down motion stimulates the lymphatic flow. And it helps to detoxify your body.

So that's something that I think many people today, because of our sedentary lifestyle, they don't get enough exercise. They're not getting the movement. And so that's important if you want to prevent cancer.

Dr. Jockers: Super important. And so what are some other things that people can be doing on a daily basis to help flush toxins out?

Ty: Drink plenty of water. It just seems so simple. I go through probably 20 of these a day [holds up bottle of water].

Dr. Jockers: I know, right?

Ty: I'm drinking water all day long.

Dr. Jockers: I've got my water right here. See that?

Ty: Yeah. Cheers!

So drink lots of water because your body is 75 to 90% water depending upon who you read. We're mostly water. And if you're not getting enough water in your body, you're getting dehydrated. It's not going to carry out toxins. Being hydrated is essential if you're going to detoxify. Otherwise, the toxins don't flow through your body. They get caught. So drink a lot of water. That's number one key. Each day, drink plenty of water.

The lymphatic system I've already talked about. Move.

We need to sweat. And so along with our lifestyle that's so cushy today for us. Can you imagine 200 years ago if the people who were on the prairie said, "Hey, you know what? People are going to make a living one day sitting in front of this screen and talking to other people and typing." They would've laughed. It's like, you can't make a living. You have to plow

the ground. You have to grow your own food. But things have changed in technology age. But as a result of this technology, we're not moving anymore. We're not exercising anymore. And most people don't sweat on a daily basis.

So sweating is key. Your skin is actually your primary organ of detoxification in your body. You need to sweat every day. I sit in the far infrared sauna. I also workout with weights. But I sweat a lot more in the sauna than I do when I'm working out with weights because most of the time people go to the gym, myself included sometimes, do a set and wait four minutes and watch the news and do another set. You're not really working out that hard.

Dr. Jockers: And it's air conditioned. You've got the air conditioning going on.

Ty: You've got the air conditioner on, too. So yeah, in the far infrared sauna, I sit 45 minutes. And I sweat like a pig every day. Why? Well, number one, it makes me feel good. I love that. Number two, it actually speeds up your metabolism an amazing amount, the far infrared does. Near infrared does as well. But number three, it also detoxifies. I'm sweating each day. And that's healthy.

Dr. Jockers: Yeah, and you know that actually stimulates autophagy as well, too. That deep heat and high intensity exercise, like you're talking about, all stimulate that autophagy mechanism. So really powerful.

And going back to your pond example there, I always tell people you want to keep things moving like a river in your body. You don't want them stagnant like a pond or else you get overfermentation and just massive amount of endotoxins, toxins produced within the body leeching out into all the systems of the body. And so you've got to be like a river and keep hydrating your body throughout the day, keep things moving through.

And constipation is a big factor as well. So the hydration with really help the body to flush as far as how that gets everything out, gets all those toxins out like you were talking about.

So what are some helpful supplements that you like to use to help with lymphatic system, liver, colon and getting the systems moving?

Ty: My favorite supplements for that?

Dr. Jockers: Yeah.

Ty: For the lymphatic system, I don't think I take any supplements per se that are for the lymphatic system. I know that there are a lot

of supplements. I know that there's a lot of homeopathy that you can take. I've taken homeopathy for it in the past. But I don't really take any supplement that's for that per se.

What I do is basically just try to make sure that I'm rebounding every day and sweating every day. And I think that's enough for my detoxification process. If I were going to do what you hear is like a full body cleanse where you do all your organs, lymphatic system would be a part of that. And I would probably take something at that point to help the lymph drainage even more. But I don't typically every day.

Dr. Jockers: How about essiac tea? I've heard that essiac tea really helps stimulate the lymphatic system. What are your thoughts on that?

Ty: It does. It does. That's one of the things that essiac tea does. Not only is it known for cancer but also lymphatic drainage and blood cleaning. A lot of the herbs in essiac are good at both of those. It's interesting, Dr. J. My grandmom who died of cancer in '98, I think it was, maybe '99. She had been diagnosed in the late 80s. And she had used essiac tea for almost a decade even though she was told she wouldn't make it very much longer.

Dr. Jockers: Wow.

Ty: I still remember going to her house in San Antonio and helping her make that essiac tea. She'd brew it herself and put it in the dark amber bottles and put it in the fridge. She took that for almost a decade. And she wasn't supposed to live that long.

Dr. Jockers: Yeah, it's powerful stories like that. Yeah, essiac has things like burdock in there. Yellow dock I believe is in there. Some of these herbs that are really good and really hit all the systems. But definitely, I've heard that it's really good for lymphatics and just getting toxins circulating and moving out of the system. So really powerful stuff.

How about supplements you like to take for liver and gut?

Ty: I don't really take anything for liver or gut regularly. The supplements that I take are more generic like a multivitamin. I take a good turmeric product.

Dr. Jockers: Turmeric is, yeah, really good for the liver. Absolutely.

Ty: So it's good for the liver. But I don't really take it for that particular reason. Just because it's just an all-around superstar. I take a lot of medicinal mushrooms which are actually both good for the liver and the gut. And so I do a lot of that. I don't really take anything—if I'm doing a gut detox, I'll take some of the natural, herbal laxatives to help the

bowels to move. But I'm pretty healthy overall so I don't typically include that every day either.

Dr. Jockers: Yeah, absolutely. So we talked a little bit about some of the supplements that you take. How do you incorporate fasting? We talked about intermittent fasting. Let's take a week or a month in your life. And how do you try to incorporate fasting in?

Ty: Almost every day, I do intermittent fasting. It's just what I do now. You probably are the same way. You get into a habit. I don't think about it as being intermittent fasting. It's just I eat lunch about 12:30 or 1. And I stop eating about 6:30 or 7. That's just what I do now. So that's my period that I eat.

And when I'm eating, even though I'm not actively thinking I'm going to eat a ketogenic diet, I eat mostly a ketogenic diet. Not that I'm always trying to stay in ketosis. But the foods that I enjoy—I love avocados. I love eggs. I love coconut oil. I love butter. I like clean meats. I like the vegetables that are the lower carbohydrate type vegetables like kale. There are certain noodles that I get that are very low carbohydrate noodles that actually made from—

Dr. Jockers: Oh, yeah. That shirataki noodles?

Ty: Yeah, shirataki noodles.

Dr. Jockers: Yeah, yeah, miracle noodles.

Ty: Yeah, so I eat pretty much ketogenic because that's what I like. So I'm pretty much usually keto, intermittent fasting. But I don't really think about it that way. That's just the way that I eat. And if I want to have a bowl of organic ice cream with the kids, then I eat it.

Dr. Jockers: So for the most part, you're eating intuitively. So you know, "Here, so I'm going to eat real foods." And I think this is great for all the listeners out there. Your baseline, your foundation is real foods like real foods for the most part.

And then basically, you're just steering towards these foods that are very rich in nutrients, trace minerals, very alive. And you love the fats. And your body naturally starts to crave those healthy fats like you were talking about—avocado, things like that.

And you've taught your body to burn fat as its primary fuel. So then when you wake up in the morning, you're hydrating your body well. And you just don't naturally feel hungry. So you end up waiting typically till lunch. You consume a good meal. And then typically that satisfies you until dinner. And you have a good dinner. And then from time to time

you enjoy. You splurge a little bit with your family and just enjoy a great time with them.

Ty: Yeah. Yeah, and I think if you can get into a habit of eating—I guess intuitively is the way that I'm eating. I feel the best this way. That way, I'm not always like, "Ah, man! I've got to go on a diet. Or I need to lose some weight." And then, "Oh, I got too skinny. I need to gain some weight." Whatever your plight might be on the metabolic scale, just eat intuitively. Eat what makes you feel good and makes you feel healthy.

And don't diet when it gets to where you're always obsessed about where you're eating. It's not healthy. It doesn't need to be the center of your thought all the time. "Oh, I wish I could have this to eat. I wish I could have that." Get in a rhythm of eating what makes you feel good. And get in a schedule of eating. And then that way, you're just living your life. You're enjoying it. And I can go spend time with Charlene and the kiddos and not have to think, "Oh, when did I get my last protein? Or should I have extra fat with this meal?"

Just get in the habit of eating what you said—clean, natural. I love sprouts. I love herbs. I love fresh vegetables. So I'm able to eat all that stuff and still eat mostly ketogenic now that I'm thinking about it. I'm thinking about what I ate for the last week. It's mostly ketogenic. But it wasn't because I was thinking, "I'm going keto." It's just what I like.

Dr. Jockers: Yeah, absolutely. Absolutely. So again, just eating intuitively. So for all the people out there who maybe have had a family member affected by cancer or perhaps they're dealing with cancer right now, what are some words of inspiration that you could give them as they embark on their health journey?

Ty: I think the first thing that I would want people to take away from this interview is that cancer is not a death sentence. So we've been conditioned, we've been programmed, literally mentally programmed to hear the word cancer and to panic because when you're in panic mode, you pretty much do what you're told. And the doctors have, not on purpose, but they just scare you into doing what they wanted you to do because you panic. You don't know that you have options. You're afraid of cancer.

So our message is it's not a death sentence. There's always hope. Empower yourself with knowledge that if you are one of the 40 to 50% of people that will be diagnosed with cancer (according to the World Health Organization) that you do have options. And it's not a death sentence.

And the fear itself can actually perpetuate the cancer. So you've heard of the phrase "being scared to death." Fear can do that to you. So if you're immune system is already compromised, you go in. You've got a lump

in your breast, let's say. The doctor examines and says, "It's cancer. And it's bad. You've got maybe three months, ma'am. I'm so sorry to tell you." You're panic stricken.

And you just went into fight or flight, which further compromises your immune system. The blood in your immune system, we can measure your blood at that point. We can see what kind of lymphocyte activity there is and what kind of NK cells and T cells and B cells in your blood and what they're doing. And they won't be doing jack at that point. Your immune system stops functioning when you're in fight or flight, when you're scared. That's where the term "scared to death" came from, I think. And studies have shown this. They've drawn blood from people to prove that fear can actually paralyze your immune system.

So don't be paralyzed with fear. Know that you have options. Empower yourself with knowledge. And my recommendation is for people to get in touch with someone like you or another functional medicine doctor who can coach them through the process.

Dr. Jockers: Yeah. Yeah, for sure. And that's so true about fear. In the Bible it talks about fear and love. And ultimately, fear is going to stop our bodies' ability to heal. And so I think part of the Fasting Transformation Summit is not just fasting and it's role on us physically but also we can mentally, emotionally, and spiritually fast as well. Fasting from negative thoughts, fasting from fear.

Ty: If you look in the Bible, Dr. J., Charlene and I were just talking about this a couple days ago. There's a passage where they're casting out demons. And this kind of demon is only going to be cast out with prayer and fasting. And that's hope. There's certain power that fasting can give you spiritually as well.

Dr. Jockers: Yeah, absolutely. Prayer and fasting I have found to be the most powerful form of healing. And really, it doesn't cost you anything other than just a commitment. And that's really what it comes down to. And so you're fasting. You're cleansing your body from the inside out. You're also cleansing your mind with prayer from the inside out and attuning to the messages that God has for you. So yeah, really powerful stuff.

And yeah, if somebody is out there, let's say, and they're struggling with cancer or they have a family member with cancer and they want to find out more about you, the work that you do with Truth about Cancer, your documentaries, where can they find that?

Ty: Yeah, it's www.TheTruthAboutCancer.com. We've got thousands of free articles out there. We've got documentaries that we've produced where you can watch some of the episodes out there. They're on

YouTube. You can watch them. Got just a lot of free information.

And the goal that we have is just to help empower people with knowledge so that you can make a good choice. The problem that I have, the problem that Charlene, my wife, has—our big beef with this whole system is that people really aren't given a good choice. I don't have any issue at all if somebody is diagnosed with cancer and they want to do chemo. That's their choice. We should have a choice.

The issue that I have is that they're told that's their only option. And that's not true! There are lots more options that you have. You just need to know about them. And that's why we do what we do. That's why you're doing what you're doing, Dr. J. We love you. We love Angel, the boys. We admire what you're doing as well because you're on a mission to educate people that they have options.

All of this stuff that the modern medical doctors look on and they say, "Oh, this woo-woo medicine," this medicine has been used because this is God's medicine—nature, herbs, homeopathy, sweating, getting out in the sun, eating real food. This goes way back to the Garden of Eden. This is God's medicine. He put it here for a reason. In Genesis, how many mentions do we have of herbs yielding fruit and seeds? That's God's remedy for health, to eat natural foods. That's his medicine.

But we're told today, "God's medicine isn't really good enough right now. We need the chemicals and the technologies that have been developed in the last 100 years to heal you because we're shocked humanity made it this far without our inventions even though we've lived for several thousand years at a minimum without radiation therapy or chemotherapy." But they think you've got to take these to perpetuate the survival of humanity. It's just not true.

As a matter of fact, they've co-opted the language to where if you hear somebody is diagnosed with cancer, they're going to go. And the doctor is going to say, "Chemo, radiation, surgery. These are your only treatments. These are the traditional treatments for cancer." Well, that's not true!

Traditional means that they've been used for traditions. Chemo, radiation, surgery aren't traditional. Eating herbs and natural foods and detoxification, using God's remedies for disease, that is traditional medicine. This new stuff that we've just invented in the last 100 years should be called alternative. Chemo and radiation and surgery should be called alternative medicine because it's not traditional. The traditional stuff is the stuff that God has given us since creation.

Dr. Jockers: Well, Ty, you're right on with that. And this has been such a great interview. And I want to acknowledge you for your passion and

your commitment to getting this message out and bringing hope to millions all around the world who have been affected by cancer. I know cancer has affected my family, affected me personally. And just what you and Charlene and your whole family represents and the message, the incredible content that you guys have in your documentary series as well as on your website, fantastic content there. I know it's bringing hope to so many people.

So thank you again for what you do and also for being a part of our Fasting Transformation Summit here.

Ty: Thanks, brother. Lots of love from the Bollingers to the Jockers.

Dr. Jockers: Well, thank you so much. And so for those of you who are listening, just remember this, this last thought. Fasting can unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life. So I hope you enjoyed this. And we'll see you on a future interview in the Fasting Transformation Summit. Be blessed!

Using Fasting Strategies in the Clinical Setting

Guest: Dr. Gez Agolli

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting.

And I'm your host, Dr. David Jockers. And I'm excited about my guest today. This is Dr. Gez Agolli. And we're going to be talking about fasting in the clinical setting. Dr. Agolli actually really founded one of the largest integrative health clinics in the world, Progressive Medical in Atlanta. And also Dunwoody Labs which really specializes in functional health testing. You can look them up online.

His clinic has worked with, what? At this point, 35,000; 50,000 patients from literally all around the world, a wide variety of chronic diseases.

Dr. Gez Agolli: This is our 20th year. So we've had close to about 45,000 patients come through.

Dr. Jockers: Wow! Yup. So you have so much experience. And your whole team has so much experience working with people who are looking for health results. And many of them have chronic diseases. Many of them have serious health setbacks. And fasting is used as one of the foundational strategies. So we're going to talk to him today, really go into that in detail.

And so, Dr. Agolli, thanks so much for being on the Fasting Transformation Summit here.

Dr. Agolli: Thank you, Dr. David. I really appreciate you inviting me for this wonderful, transformational fasting summit. And when you and I discussed this well over a year ago, which was your vision, I was excited because I've seen the personal benefits on utilizing different strategies of fasting. And from a scientific perspective, I'd ask myself, "Wow! Is it really possible to get these amazing results that are being reported?"

And it's just not the functional, integrative doctors who are reporting this. We're having doctors from all over the world. I've talked to endocrinologists. I've talked to gastroenterologists. I've spoken to oncologists who were even receptive to utilizing fasting strategies before introducing chemotherapy. And so it's really exciting to be part on the vanguard on utilizing fasting in a clinical setting.

Dr. Jockers: Yeah, absolutely. And when did you first come across the idea that people could use fasting as actually a way to help improve their healing response?

Dr. Agolli: Yeah, probably at the beginning of my medical career. Before I went to medical school, I was involved in traditional naturopathy and nutrition. And obviously, natural healing has been talking about fasting. We go back to the days of Hippocrates who is the father of medicine. And he talks about that in his writings and utilizing the benefits of air, sun, heat, and abstaining from food to heal the body. So that was probably the beginning.

But as I went on to my medical training and education and getting into clinical practice and working with other physicians and other practitioners, it wasn't really brought up that much at the beginning. And it has really made an impact in our practice in the last five years. And now, it's really making some traction because now we're really seeing that, hey, this is a great tool. It's powerful. We know that there have been ancient studies.

Anytime you look at any type of therapy, Dr. David, you want to first of all say, "Is it safe?" And when I went through a medical training, the first thing we do is, "First, do no harm." So it passes that test when it's done properly of course.

Another thing that I find very interesting—it's inexpensive. We're coming into a society right now where there's a cost factor in every type of therapy that we do. And of course, investing in your health is very important. There's nothing more important than that. And I do believe there has to be an investment on good food, on good supplements, good nutrition, working with very good practitioners, and also making an investment in the proper testing to find out what's happening in the human body. But it's inexpensive. So you can't beat that.

And the key—it's powerful because there are a plethora of benefits that we can talk about. But that's one of the reasons that really piqued my interest.

And my role has changed in my organization. And I'm more involved in teaching, business development, administration and management. And I am part of the vision of my organization.

And this is a key area that I want to communicate with your viewers today. All of our healthcare leaders right now are looking for strategies. And this is probably one of the best strategies. If we would teach responsibility to our population I think you're going to see chronic diseases start to go down. And that's what's exciting for me—anybody can use these therapies that we're talking about today with fasting in general.

Dr. Jockers: Yeah, absolutely. And so how do the physicians that are working and the practitioners and nutritionists, dieticians at your clinic—how do they start to introduce the idea of fasting to people?

Dr. Agolli: Yeah, one size does not fit all. And this is what we're learning in fasting in general. The strategies that we utilize—because our facility is unique, because we have a team of practitioners. We have medical doctors. We have naturopathic doctors. We have chiropractors, acupuncturists. We have nutritionists, registered dieticians. All working together as a team in concert.

And our system is based on specializing in chronic diseases. If you have an acute problem, don't come to our facility. We focus on chronic diseases, which basically means longstanding. And a lot of patients we're seeing, Dr. David, are dealing with a plethora of issues—crushing fatigue, thyroid issues, type 2 diabetes. They're dealing with obesity, which now I call diabesity or inflammobesity, which really is a connection there with inflammation. Those are a cross over. And I wanted to talk a little bit about some of the adiponectin and these adipokines which are called leptins. And we'll get a little bit into that because I think it's fascinating how fasting makes a huge impact there.

But at Progressive Medical our main focus is empowering that individual, that patient on their journey to health. And fasting is introduced at one period of time if they're the right candidate.

Now, who's not the right candidate? Well, first of all, I believe that the majority of Americans are candidates for some form of fasting. But the [wrong] candidate is someone who may have a severe eating disorder. We want to be careful about that as well because there's a psychological component there whether it's anorexia, bulimia.

There's something called orthorexia which most people don't know about which is really having this issue with allergies and addicted to that food allergy and really just being OCD about it. Don't get me wrong. Food allergies are very, very important. But sometimes, they're sensitivities more than an allergy. And we work on a rotational diet on that.

Those individuals we don't want to really get started on a fasting program. Anybody who is pregnant, I'm talking common sense here. But I don't recommend fasting if you're pregnant. And something called severe cachexia, which we'd normally see in cancer patients which is just a severe muscle wasting and degradation. Although cancer has some great, great research on fasting, I'd be cautious there. And sometimes we see endstage renal failure where we may not utilize that as much.

But pretty much the rest of the time we think that fasting done appropriately is a great, great, great strategy. At our facility, we utilize it during something called the detox visit. And that's typically the second visit. Patients are evaluated the first visit. Second visit we talk about the benefits of an anti-inflammatory diet based on their food sensitivities and also based on some general guidelines. And this is where we're going to start incorporating intermittent fasting.

We're really big on intermittent fasting although there's a lot of great research on the fasting mimicking diet. There's also some great research on water fasting. But at our facility, we focus primarily on the strategy of intermittent fasting. And this is something that you and I have been discussing for a long period of time. There are many ways to do that and depending on how you educate the individual.

Let's think about that, Dr. David: fasting. Well, basically, when you eat your last meal and you wake up in the morning and you have breakfast, it's really break fast. So when you're allowing that body to rest, there are numerous benefits.

You're resting the digestive system which is really the key to good health. Gut health is the key to longevity. It's the key to improving your overall health. It's the key to brain function. They call the gut also the second brain. And we're really finding out a lot of research on gut health.

So we like to use it in that capacity. It's been very, very, very beneficial to our patients because we're dealing with individuals. As they start to make lifestyle changes when they come to a facility such as ours, it's a great way to break certain food addictions which I think is very, very important.

Dr. Jockers: Yeah, it's so important. That's for sure. And so you were talking about these basically adiponectin and different inflammatory

agents as well that are produced by the fat cells. So let's go into that and really how fasting impacts it.

Dr. Agolli: Yeah, it's really interesting because in the early 1990s—I believe it was 1994—scientists made an amazing discovery. Most individuals don't realize that in our fat cells, we call these adipose tissues, we have something called adipokines. And these adipokines—I'm going to primarily focus on leptin and something called adiponectin. They're basically messengers. They're cytokines basically. But they're also considered the same area as hormones. But they're really more of something called a cytokine which sends these little messages in the body. And they're in our fat cell.

And leptin is one of the adipokines that actually has been known as one of the greatest discoveries to help with obesity and putting on weight loss because basically when you have lower amounts of the leptin, your body is saying, "Eat more." And we're seeing there are a couple genetic disorders with children where they have very low amounts of leptin. And they just have ravenous appetites. They just eat and eat and eat. And they morbidly become obese until they figured out, "Well, it's these leptin receptors."

We also now have found out that there's something called leptin resistance. And so you can have normal levels of leptin. So when you have normal levels of leptin, this basically tells your body you're satisfied and you don't need to eat. When you have leptin resistance, it can be normal, but your satiety is not satisfied.

So now we're seeing some really interesting research on leptin. And now we also have seen research on adiponectin which also sends a message to produce glucose. It's gluconeogenesis. So when you add those two together, those are two key components in how the body's metabolism is going to function on a normal capacity and how the body communicates.

And because we've seen an increase in obesity—and I call it diabetes, which there's a connection with type 2 diabetes and diabetes. We've also seen a connection with inflammation and obesity called inflammobesity. And those two adiponectins play a huge role.

Now how does fasting play a role in that? Well, when we abstain from food, the body goes through transformational changes. And during that time period, you start to get into a stage of feeling satisfied, especially when you're actually staying hydrated. When the body actually is looking for food sources, there's a hormone in the stomach called ghrelin. And that ghrelin actually is telling the body to eat because it begins to get elevated. And there's a correlation with that hormone. And there are also correlations with the adipokines as well. And by actually staying

hydrated, you can shut down that mechanism. That ghrelin is being satisfied.

So when you start to hear this message, whether your ghrelin is becoming elevated or your leptin is actually dropping very, very low, your body is saying, "Feed me. Feed me." But really what it needs is to be hydrated. And that's where you're going to start to feel satisfied, satiated.

And the hypothalamus is actually not a gland. It's actually a bundle of nerves. And it works as a feedback mechanism. And that's what's so unique about all of these different receptors, Dr. David. There's a feedback mechanism with leptin and adiponectin. And adiponectin is so, so important because that's going to tell the body when to make glucose, when not to make glucose to turn into energy. And then we add on that important hormone insulin.

And what fasting does—fasting actually just stops all of that. And when it's done properly, then we start to see our adipose tissue start to shrink. And the way you can measure that—we're starting to see in the circumference of a male's waist. If it's over 40 inches, then we're having a problem. And if it's a woman, it's 36. And there's some hip to waist ratio issues, circumference that we're seeing as a great indicator for metabolic diseases.

So when we start to use fasting, all of this comes into balance. And we start to see some of the results because we're going to turn that adipose tissue into energy. And we know that after a period of time we start to burn ketone bodies. And then we start to get the benefits of ketone bodies for better brain function. Our metabolism works more efficiently. And rather than burning those carbohydrates that we're eating or we're burning—when you have too much protein, protein actually can turn into glucose. And even when you have excess of amino acids as well.

And the key here is by the proper amounts of fasting, whether it's going to be 16 hours, 18 hours. Optimally, the best results that we've seen are between 18 and 20 hours for type 2 diabetes and actually getting those adipokines in balance and really burning the fat.

Now, if you start also adding proper hydration, proper minerals—we like to use a little bit of Himalayan salt or any good sea salt that actually came from a good source. You get the right amount of electrolytes.

But then you start looking at strategies two to three days a week on high intensity therapeutic exercises. We're not talking long term here. We're just talking, depending on you as an individual, 10, 15, 20 minutes. And if you do that an hour to two before that fast, now you're exponentially increasing that weight loss, that adipose tissue loss.

And this is what's exciting with the research that we've seen at the clinic when you include the intermittent fasting because obesity is a big problem. Obesity is one of the areas that we've seen—and it's not me saying it. The research is saying this. We're seeing obesity increase diabetes by close to 50%. We're seeing obesity increase cancer by a high percentage rate. And these are just two severe diseases. And there's a plethora of other disease. Autoimmune diseases we're seeing on the rise.

So yes, this is an uncomfortable conversation for some individuals to hear and talk about, that they're overweight. But the reality is, rather than going on yo-yo dieting which doesn't work, rather than going on a fad diet that doesn't work, rather on taking these dangerous medications that suppress your appetite. Maybe short term that's okay. But long term, we're burning up our receptor sites on our neurotransmitters that are very, very important. And then when you start gorging afterwards, you're going to gain the weight back. It's called yo-yo dieting.

By actually utilizing the strategy of intermittent fasting with a trained professional or, for those of you who are listening to the Fasting Transformation Summit you're going to get some great strategies. You're going to get some great techniques and knowledge from Dr. David and the team he put together.

This is exciting because, number one, when it's done properly it's safe. Number two, it's inexpensive. Number three, it's powerful when done right.

And my focus is not only obesity. But I really want to talk about obesity because it's an area in our country right now where we're spending all this money. Yet we're seeing individuals getting heavier, heavier. According to the CDC, certain states—and I'm not picking on Mississippi, but it's the number one state. I'm not picking on Alabama. I'm not picking on some of these other states. But now we're having close to 40% of the population. This is staggering. Staggering!

Dr. Jockers: Yeah, when you look at somebody who is overweight or obese, they're very energy inefficient. And what that means—think about it from a money perspective. It's like they put all this money in their savings account. So they've got all this fat storage there. But they're really bad at actually getting in there and using it for energy.

So imagine you just put 80% of your income in a savings account. But you can never get it out. That would stink. And so none of us would want that. That's actually what's happening with somebody who is overweight or obese.

So when we start to fast, what happens is we start to actually train the body to now go into the savings and utilize that for energy. And obviously, we start to burn that down, which gives us more of the physique that we want but also reduces inflammation. Like you were talking about, it helps optimize. Loved how you went through adiponectin and leptin and how it really helps optimize those things. So yeah, absolutely. So key.

And you were also saying that in your clinic you guys are seeing really good results when you do an 18 to 20-hour intermittent fast. And then did you say exercise right at the end of that fast before breaking it?

Dr. Agolli: Depending on the lifestyle, of course. We all know that individuals have busy lifestyles and working. If you can only work out in the morning, absolutely you need to exercise because your movement is medicine for the body. I want you to understand that. Moving is critically important, whether it's just walking vigorously.

But yes, the best results we've seen—if you want to really go after a weight loss program, using intermittent fasting 18 to 20 hours, staying hydrated. My [pet peeve] is having organic coffee and utilizing whether it's MCT oil or coconut oil or grass fed butter, depending on what you prefer. I like to mix it up in a blender, whether you want to use green tea if you have a problem with coffee. And that's perfectly fine.

If you find that you have to have something else besides that, we do talk about bone broth which I think is okay. I'm a purist. I just want water, little bit of the trace minerals through Celtic salt, sea salt, or Himalayan salt. And of course having coffee which also creates a thermogenic response anyway which there's a lot of good research on that. I think coffee has gotten a bad rap. They say too much of anything is a bad thing. It can affect your adrenal glands. But the body adapts. Or either green tea. Lots of green tea that we have all these polyphenols. And you also have that thermogenic effect.

But if you incorporate right at the tail end, whether it's an hour or two and you really hit it hard even though your energy level may be declining. But if you hit it hard with high intensity interval workouts, whether it's going to be on an elliptical, whether you're going to be utilizing a miniature trampoline as well. There's some really good research on that for your lymphatic system. Whether you're going to be adding kettle bells or a little bit.

Whatever you can do in there to get that heart rate up for a short period of time whether it's going to be 45 seconds to a minute, we've seen the best results. We've seen dramatic results.

And what's exciting at Progressive is that we actually do a picture. It's

called Fit 3D. And that Fit 3D takes a 360° thermal picture of the body. And for confidentiality, we just send it to your cell phone, if you want to share it with your doctor. But that's also a motivational tool.

So we've got before and after of that Fit 3D picture. And let me tell you something. Seeing is believing because that motivates you when you're seeing the circumference.

Adipose tissue is that ugly, ugly visceral fat. This is the unhealthy fat. This is what's causing cardiovascular disease. This is what's taking 600,000 Americans, according to the American Heart Association, succumbing to cardiovascular disease. It's not just heart disease. When I use the word cardiovascular disease, it's really vessel disease. And what's happening is that obesity and type 2 diabetes are one of the main culprits. And it's not only cholesterol. Really what we're finding in the research is oxidized cholesterol. It's the particle size of the cholesterol.

And that's why I encourage you to work with your doctor to get the right type of testing. And at Progressive and Dunwoody Labs, we believe in really high tech testing. I call it *Star Trek* medicine. And that's why looking at all these different markers and looking at these adipokines, we test for adiponectin. We test for leptin. We look at all these different cardiovascular markers as well, not just cholesterol.

The body needs good cholesterol. The body needs cholesterol. Cholesterol is a transport mechanism into the vessel. That's how it's transporting Co-Q10 and all these energies and making all these energies from a biochemical perspective.

So one size does not fit all. But I will tell you. By utilizing the benefits of intermittent fasting and looking at how and when you exercise could make a huge, huge impact. And the research is compelling as you and I talked about.

When we fast for 24 hours—and I recommend for those that can feel adventurous and you're feeling comfortable with fasting. Start off small. If you can get to 24 hours, the research is showing that on the 24th hour, you're releasing so much growth hormone—300, 400, 500% even. And if you added the interval training, it's even exponential. And there's research to back that up as well.

Growth hormone, the master hormone that's released from the pituitary, is going to make you stronger. It's going to burn body fat. It's going to help your cognition. It's going to tighten your skin. Back in the early 80s, Dr. Daniel Rudman did a study on exogenous hormone from cadavers and brought it into the elderly population. The results were amazing. Amazing!

So you can actually spare the expense because growth hormone is expensive. You are using injections. And it could also have some side effects that you don't want. By using this strategy with good nutrition, proper amino acids, your growth hormone is going to rise as well.

Dr. Jockers: Yeah, it's powerful. And it creates more resilience. I know, myself personally, this is what I do. So I typically will exercise fully fasted, usually something like 16, 18, sometimes 20 hours fasted. Sometimes, I've even exercised 24 hours fasted. And I feel amazing when I'm exercising. I need less oxygen because my body is using ketones as its fuel source, burning fat for fuel. My strength, my stamina, my endurance—all of that is actually better than if I were to be exercising on a shorter fast. So your body creates this amazing level of resilience.

And human growth hormone, a lot of people are concerned about losing muscle mass if they train fasted. But actually, because you have this spike of human growth hormone, your body is preserving lean body tissue. It's actually preserving it. You're going to get a better boost of muscle building afterwards when you consume a really good, healthy meal shortly after you finish exercising. So it's really good.

Dr. Agolli: That's why it's so powerful. And what our message here with the Fasting Transformation Summit is that anybody can do this. Anybody can do this. It's trial and error. There are so many different strategies. Dr. David has great strategies. You can just start off as simple as 12 hours. That's really the baby step there. And then you can get into the brunch fast which is 14 hours. And you get into the next level, and it's 16 hours, which you start seeing the benefits of it.

But I want to mention. With some of the patients that we've seen, because we obviously treat more than obesity. I just like to mention obesity because that's really the gateway to chronic disease. Don't let anybody fool you that it's okay to be 10, 15, 20, 30 pounds overweight. It's just not. We've got to get back to really preaching good science on how to have weight loss. We've got to get rid of the fads. We've got to get rid of all these pills and potions that just don't work. And just getting back to really good, solid science is where it's at.

But I also want to mention what we do at Progressive is that a lot of patients come in. And they want to understand, "How do I get healthier? How do I prevent cancer?" A lot of individuals are concerned, rightly so. We've seen an increase in cancer. When President Nixon actually had his second term inaugural speech, he talked about declaring war on cancer. And that was back in '72, '73. I forget exactly when it was.

But at that particular time, we actually had one in seven Americans getting cancer. And they were declaring war. And I can just tell you right now, as a former proud military person who served in the United

States Air Force, I can tell you when the military goes to war, they go vehemently with great force. So we did that as a country.

But where are we today with cancer? We went from one in seven. Now we're actually one in two with males and one in three women in their lifetime are going to get cancer. So where's all this research going?

And we have to understand that cancer is a multifactorial disease process. There is genetics involved, which is really more epigenetics. We now know that there are environmental components. We're seeing an all-time high of chemicals, which I believe probably is one of the main reasons why. We're seeing a decline in our diet. We're seeing devitalized food. We're seeing food that's loaded with chemicals, GMOs. I call it the Frankenstein food. All this plays a role.

But one of the best ways to combat against that is to detoxify the body at the cellular level. And at Progressive this is what we talk about. If you want prevention, learn strategies to detoxify.

Now we have colon detoxification which is very important, I believe, too. I'm not talking about that. We also have food detoxification programs. And we have phase 1 and phase 2 liver detoxifications, which is all wonderful. Don't get me wrong.

But without utilizing the benefits of the intermittent fasting, you're going to fall short. Why? Because of a very simple word that Dr. Jockers and I have been studying. It's called autophagy. And that word basically means intracellular degradation. Yeah, your cells can clean themselves up. Your cells can actually clean up that cellular debris. How? When you fast, that mechanism turns on autophagy. And we're getting rid of the bad cells. And we're making new cells.

And this is what's exciting about benefiting from intermittent fasting. Yes, weight loss. Yes, better clarity. Yes, we can have more growth hormone, feel stronger. But really the key is to clean that cell up one cell at a time. And we've got trillions of cells. 100 trillion cells is what some scientists are reporting. And these cells communicate together. And when they don't communicate, it's like sludge.

One of the best examples I can give. For those of you who have ever been down to Florida—I lived in Florida for about 15 years. And I would drive down from Ft. Myers to Ft. Lauderdale and go down Alligator Alley. And let me tell you something. You know what you see? You see the swamps. And that swamp is sludge. You can't see anything. Yet when I went to visit the Colorado Rockies and I watched the water, it's pristine. Why? Because it's flowing. And it's communicating. And it's pristine water because it's moving, flowing.

This is what your vessels need. Your blood is the river of life going through the cells. And we need to have good, healthy blood transporting all those oxygen and nutrients from one cell to the other. And fasting can do that, Dr. David. And that's why I'm a big believer, not only personally but professionally. And that's what I'm really excited to share with our viewers today.

Dr. Jockers: Yeah, absolutely. And so how do you personally apply fasting. What kind of strategies?

Dr. Agolli: Yeah, I've tried different strategies as well. And I find the best strategy for me is five to six days a week. I have to rest on day seven as God told us to rest on a day on the Sabbath. And I really do it because my wife wants me to eat with her earlier. So that's really for her. Otherwise, I'd do it all the time. But I go anywhere from 16 to 24 hours. Pretty much 18 is the norm for me, 18 to 19. I do try to get in a 24-hour fast at least once every seven to 10 days to get that growth hormone release.

I did sustain a very serious injury over the summer that I had a wound when I was traveling in Europe. Unfortunately, I couldn't work out. But my maintaining my fasting lifestyle, I didn't gain any weight. I felt strong. Now, I'm back working out for the first time after 14 weeks of recovery. And I'm feeling really good about it.

And I have to say that when you're injured you feel depressed. You're not moving around. You feel sedentary. You feel lethargic. I really was very concerned with this injury, thinking that I may start to gorge and eat because we all develop this ravenous appetite because of ghrelin and leptin resistance. This is why we're feeling that way. It was wonderful that I can say that I didn't experience that at all. It was fascinating.

I did take some time to heal. But I think that the fasting really expedited that process as well. It could have been a lot longer. It could've been a lot worse. I've had several of my colleagues say I easily could've lost part of my foot, which is great that the advances in medicine helped me with all the other therapies as well, with the hyperbaric and the ozone. And all that stuff is wonderful. But I have to say. What really kept me in tune was the fasting.

Dr. Jockers: Yeah, that's a powerful testimonial. Well, this has been a great interview, Dr. Agolli. Any final words of inspiration for our audience here as they look into fasting as they're listening to these interviews and being inspired to move forward with a fasting lifestyle?

Dr. Agolli: Yeah. Well, first of all, I want to thank you for sharing this opportunity. I just want to encourage the listeners out there. As I mentioned earlier, obesity all-time high. Type 2 diabetes all-time high.

Chronic diseases, autoimmune diseases, cancer all-time high.

I just want to speak to the cancer population. Dr. Valter Longo at USC has done some great studies. If you're doing chemotherapy with your oncologist, I encourage you to listen to your oncologist. But I also encourage you to do some research. Dr. Longo has it where you fast for 48 hours before chemotherapy. It actually mitigates the side effects by almost 50%. That's 50% less damage.

Why? Because when the body is fasting, the cells start to protect themselves. And so all of the cells that usually would be damaged, the good cells, by chemotherapy are not. So just incorporating that.

For those of you who want to prevent cancer—well, obviously, this is something we all want to do. Prevention is the key. An ounce of prevention is worth a pound of cure. Fasting may do that. I can't sit here and say to you that if you intermittent fast you won't get cancer. I can't sit here and say to you if you intermittent fast, you're not going to get—No, I'm not saying that at all.

But everything that you can do to prevent all of these diseases are to your advantage because the goal here is to live a long, healthy, functional life. Not just a long life. A lot of individuals right now with advancement in medicine can live a longer life. But are they living a functional, thriving life. And I'm just going to say they're not.

And that's why I want to encourage all of you to look at these benefits of intermittent fasting. I've seen it myself, at our clinics, our practitioners working alongside healthcare leaders and visionaries such as Dr. David Jockers. Fasting is here to stay. It's not a fad. It's been here for thousands and thousands of years that we've documented.

Tap into that research that God has given you the innate ability to cure yourself one cell at a time. No doctor can cure you. No therapy can cure you. Your human body has the ability to heal itself and the fasting, whatever you decide to do—water fast, intermittent fasting, not have food. Many strategies.

And that's why this Fasting Transformation Summit is going to help you get on the road to wellness.

Dr. Jockers: Well, thank you so much, Dr. Agolli. Fasting has the ability to unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life. Thanks so much for tuning in with us.

And if you're getting a lot out of these interviews, I just want you to consider owning the entire Fasting Transformation Summit for yourself.

That way you have lifetime access to all the videos, the audio, as well as the transcripts. You can go through that. We also have a ton of bonuses that you can take advantage of. So if you would consider owning, we would really be blessed and honored by that. And so we'll see you on a future interview. Be blessed, everybody!

Fasting for Self-Love

Guest: Sam Asser

Dr. Jockers: Well, welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. I'm your host Dr. David Jockers and I'm really excited to bring today's guest, Sam Asser. She is a true fasting enthusiast. She lives it, breathes it. And you, guys, are going to see, based on this interview, we're going to talk about fasting and self-love.

And so Sam is an Australian-based health coach. Although, now she lives in Canada and she runs an online community at FastWayToHealth.com, she's dedicated to the art of fasting and she runs that with her brother Mitch. And both of them, they started the website and community as a way to help people to live life with passion and purpose, to enjoy electrical energy-building food, and most importantly to help gain self-love and acceptance.

They've hosted a few of their own fasting summits and have created a 28-day fasting course to help build awareness and support people with the use of fasting on their healing journey. And so, Sam, really excited to have you on with us today. And if you can share with the listeners your story and how you really got started with fasting.

Sam: Thank, you, and I'm super excited to be here, as well. Great question. So my journey started like so long ago now. And then when I think back to who I was before, my past life, as I like to call it, I was someone who was constantly searching, like constantly searching for the next best thing, the next best diet, the next six-week challenge that

I would never finish, all of the things. And I was constantly binge eating, and waiting for Monday, and listening to everybody else tell me what I needed to do for my body, and had such a problem with being able to actually listen to myself.

And so I was on this journey for years. And I thought I was actually pretty healthy. Like I was in the health and fitness industry, but was bound by all the conditions and beliefs that had been put on me in the lifestyle that I was brought up in.

So I remember just changing my life like shifting everything. I moved cities. I moved jobs. I ended a long-term relationship. Absolutely everything. And I remember thinking, "I have no idea who it is that I am. I have no idea what I'm doing in this world or what my purpose is." And on top of that, I can't stop binge eating. I can't stop drowning my emotions with food. I can't stop feeling crap about my body, and also feeling bloated, and having hormonal imbalances, and all of the things that were coming with like just not taking care of myself.

And I woke up one day and I thought, "Something needs to change." And I'd never felt this before. Like I'd always woke up and I'll be like, "I'm going to start on Monday a new diet," but at this point, I had never felt this before. It was so like drawing a line in the sand, "That's it. Like, there's no going backwards, only going forward. Something needs to change."

And I'd learned about fasting previously. And it was in the back of my head, but not something that I'd ever committed to or ever had felt that was the right time, I guess. And it came to the forefront and I was like, "I'm going to fast."

And so the next day, I went into an extended fast. And from that point on, it literally changed my life. Like it was the catalyst for change that propelled me into mindfulness, into a self-love journey, into a listening to my body, and building a better relationship with food and to my body, and allowing me to explore the depths of fasting, and what that led to, and essentially becoming immersed in that because I was taking myself to a new version, constantly upgrading, it was like personal development on steroids. And fasting was the catalyst for change in my life. So that's when my journey started.

Dr. Jockers: Yeah, that's powerful. I've always been a big believer in just the idea that pain is really our greatest teacher in life. And that it's a set up. And ultimately, our biggest trials are a set up for our true testimony and what we get to bring to this Planet and to the people around us. And so you're an example of that.

And so when it comes to food addictions, I know for myself, it's really

easy to get hooked on just eating every few hours if I allow myself to. It's like, "Eating feels good. I get this dopamine release. This natural transmitter release that makes me feel great." Why are people so addicted to food, in general?

Sam: Mmm, that's a really good question. And I think of this as someone who is in a state of overwhelm, or stress, and going in that rat race. Like just going and doing. You wake up and you do your thing. You come home and you put the TV on. You're on your phone. You're on social media. You're on all of these things. And essentially, what they're doing is numbing the pain or numbing the emotions that someone's not willing to feel.

And I think it's the same is food. I think food right now is used as a suppressant. And as soon as we eat, we suppress whatever it is that we're holding on to. And right now, where I think in humanity, I think people are starting to break free of this, but I think right now, we're avoiding what it is that we truly need to feel. And that's emotion. And that's looking in the mirror and seeing us for who we truly are. And I think people aren't ready to go there, ready to be vulnerable, and open themselves up. And so they're suppressing themselves with food.

And I think that's where addiction is coming into it. And I think really the work needs to be done from the inside out. And I think that will be a way in which people can start to evolve and start to overcome these things. And fasting is an incredible vehicle to do that because when you're fasting, you're abstaining from food. And so you're allowing the emotions to come to the surface, the trauma, the things that you've buried inside of your body.

We bury emotions in the form of fat like that stores or in the form of disease in our body. And as soon as we can actually release that, and do that, and not constantly suppress it, then I look at it like a beach ball. Like, have you ever tried to put a beachball under water? Like, you can hold it down for a certain amount of time until it goes, "Vroom!" to the surface and explodes.

And it's like what we're doing to ourselves. We're suppressing, suppressing, suppressing with food. But there comes a time where if we're not going to allow it to open naturally and go through that natural course, then it's going to explode somewhere in our body. It's going to explode in the form...It might be a little nudge in the form of a cold and flu. But if we suppress that, as well, then it might explode into something more deeper and more serious. And so I think that's why food addiction, essentially, is coming from is a suppressant. The more that we can allow it to come up through fasting naturally, then I think that's where the true healing lies.

Dr. Jockers: Yeah, that's so good. We have mental and emotional pain. And it's very easy to cover it up with things from the outside, and rather than going deep on the inside, and food is one of the more accepted ways to cover it up. It's much more accepted than a lot of other addictions that people have. And it's easy to just get hooked on consuming small meals, grazing throughout the day, and just constantly getting that dopamine hit. So I'm right there with you.

And so when we fast, obviously there's incredible mental and emotional benefits to just restricting food for periods of time. And can you go into more detail on that?

Sam: Yes, absolutely. And this is something that I experienced like straight away when I started fasting was the energy levels, and the clarity, and focus that I experienced. When you think of fasting, you think how can you do that and work or how can you do that and still continue your life because you'll just be like not be able to move? But it's actually interesting, the opposite occurs.

So you have so much energy, and so much focus. And depending on what fasting you're doing, it's like I didn't know how efficient I could be in that timeframe of not be putting food in my body. And I was like super energetic, super focused, had so much inspiration. And I know you speak about how ketosis is something that occurs when fasting. And the ketone levels can help brain health, which essentially in fasting, that's where you can get that feeling of inspiration, of creativity, of finding your purpose and passion, and wanting to go down that path. And so it really helps to clear your mind to be able to think in that way.

Also, emotionally, it helps you to be able to let go of all the noise, let go of all the overwhelm, and to sit in stillness with yourself, to be with yourself. And I think once you get to that place of allowing and surrendering, then we can allow the emotion to come through, we can allow whatever it's teaching us to come through, and to let go off. Some people call it you release baggage or you release body fat. And that's essentially because you release whatever emotion you were holding on to. And letting go of that frees you. And that's a huge relief for a lot of people. So I think that's also an incredible benefit that will come in the mental and the emotional gains of fasting.

Dr. Jockers: Yeah, that's so good. And from a ketosis perspective, when we fast, our body still needs fuel. So it goes in and starts to break down our own stored body fat, creates these ketones. And they help reduce the neuro inflammasome. So inflammation in the brain helps stimulates brain-derived neurotrophic growth factor, which just makes us feel alive and mentally alert. And just it helps increase purpose and inspiration like you've talked about.

And so fasting is certainly free. It's certainly something that really anybody can start doing immediately. But it's not exactly easy, especially when you first get started. And so how do you help people overcome the mental and emotional challenges that come with the beginning of a fast?

Sam: Yes, it's definitely not easy. And it's really good to note because you do need support and you need like I like to create a bit of a toolbox for people. And so the analogy I like to use is like a rainbow. So yes, I know a rainbow. You look at the end of rainbow. And you've got a pot of gold. So we all want to get to this pot of gold. But we need to start at the start and get through all of the different weathers to get to that pot of gold. So let's look at that as your fasting journey.

So to start, you need to find your reason as to why you're doing it and get really clear and connected to that. And then, you need to build your toolbox to get you through. So you're going to detox. It's a healing crisis that goes on. And that's what can make you feel yuck. It can make you feel challenging. It can make you feel like you want to give up like, "Oh, no, this isn't for me." When that comes up, it's a healing crisis. We all go through it. You just need to be equipped to know what to do in that scenario.

So peppermint oil is like my go-to. I'm not even fasting and I have it close by. But you can use things like this that can help to be able to make the headaches go away, or make you feel better, give you a boost to managing when you're feeling low. Making sure your four elimination channels are working. So that's defecation, urination, perspiration, and what's the other one?

Dr. Jockers: Respiration.

Sam: Respiration. So doing breathing exercises. Making sure your colon is clean or getting colonics and enemas, making sure you're drinking enough water to stay hydrated, and making sure that you're getting into a sauna, or doing something to make you sweat. These things are going to help you feel better once you've gotten through that process.

Plus, you're going to be releasing a lot of toxins in your body. And you don't want them to get stuck. You don't want to do it an unsafe way. So making sure they're flowing out and then having that mindfulness practice. Like you speak to a lot of high-performance people or successful people, they all talk about having a morning routine or a mindfulness practice. And it's the same with fasting. Like can you journal what you're going through? What are grateful for? What kind of morning routine have you set up yourself to put yourself in that state of success and dealing with it?

And I think having these components is really, really important when

it comes to fasting and getting to that pot of gold at the end of the rainbow. And then, of course, your community, it can be a lonely place. Like sometimes, you're the odd one out and you're the weird one for doing fasting. But you just need to find your tribe because there's loads of us weird ones out there that are doing this. And we're coming together, and we're sharing, and helping, and encouraging.

And you just need to find that community, because then once you're there, it doesn't matter what all those people say that are going to try and turn you of course. It's a good little lesson, it's a good little test because sometimes it's also the ones that are closest to us because they don't want to see you change and they hold on to who you are. Or what I found is that sometimes, they're not ready in their own journey to go through this and you're intimidating them because they can see what you're doing for your health.

So support yourself and make it easier on you by finding a like-minded community that can help you on that journey. And then try to not talk about it anywhere else. Like sometimes you just need to go about your journey in a silent way, and just talk to the ones who really get it, and can really support you.

Dr. Jockers: Yeah, I love that. Community is so important because when you try to fast all by yourself, especially if you're making food for your family and what not, you can feel all alone. It's really easy to feel isolated. And so getting a good community where you can express yourself and just feel like you're not doing it alone, I think is absolutely vital. It's priceless. And so what would you say to somebody who's just getting started with fasting? What are the most important things they need to know?

Sam: The most important thing, without fail, that I talk about with everyone is why are you doing this? Why? Because if you have a strong enough why, then it doesn't matter what people say to you. It doesn't matter if you have a family event, or a dinner party, or someone's waving chocolate cake in front of your face, it's you are so ingrained. And people say this to me all the time, they're like, "Sam, you have such amazing willpower."

It's not willpower. It's that drawing a line in the sand. Being in tears that like it's like, "Something needs to change because I want purpose. I want to feel good. I want to like..." You're so connected with your reason as to why you're doing this. And it's making you cry and it's making you so emotionally triggered like you have that emotional condition. Find that why, and write it down, and get so clear on it because then it does not matter what's going on in your life, you will find a way to make it happen.

And Neil Martin, I remember speaking with him on the Fasting Summit, and he said, "You need...If you haven't cried about why you're doing this, then keep going. Keep riding because you need to find that emotional connection in the whole process, no matter the healing crisis, no matter the tough emotions that are coming through, it'll be so much easier because you have that reason as to why you're doing it and not because someone else told you to do this." So find your reason why?

The second one I would say is find your community, whether that's an online community, a tribe, or a group, whether that's a direct online coach or a one-on-one coach, whatever it is, find your community that's going to support you.

And then, the number three is educate yourself with things like this. The best thing that I can do on fasting is at least spend one hour a day educating myself on fasting because then that just inspires you. It motivates you. You're like, "Oh, my, gosh, my body's going through this." And you're understanding what's going on and it just drives you to keep going because you can see the process and see what's actually healing and how this miracle of a body is working. So educate yourself. And this is the perfect platform in order to do that.

Dr. Jockers: Yeah, it's so good. I'm glad you brought that up. You've got to make sure that the more you're educated on it, the more it gives you that gusto to say, "Wow! You know, I'm really inspired. I'm getting the autophagy benefits right now. I'm breaking through these emotional barriers." And it just keeps you really, really engaged with it.

And so what would you say to somebody that's out there that's interested in fasting, or maybe they've struggled in the past with an eating disorder, or perhaps they're struggling with an eating disorder right now, what would you say to them?

Sam: Mmm, that's a really important point. And I'm actually working with a client right now that's going through that process. And it's funny because we can have that need to want to fast, but right now the best thing for that person is to let go of that need to fast and let's look at what really matters. And that's building up you. It's building up that internal self-love, that relationship with your body, that relationship with food.

And it's incredible to watch her journey when we've let go of that and focus on this and the impact that it's having on her and her journey, and what she's feeling, and how she's changing, and how she's feeling things about herself she's never felt before, or in a long time. And I think that's more important at this stage for someone who is going through something like that.

And I think check in with your medical practitioner or some support system before you make a decision. If you have suffered in the past or if you're suffering right now from an eating disorder, please make sure you do that, but then, get the support. The fasting can wait. I think the most important thing is to let's look within at what's really going on and let's build you up because it can dramatically change your life in the most positive ways if you look at the thing that's mattering most.

Dr. Jockers: Yeah, that's great. And so how do you implement fasting at this stage in your life? Do you have it scheduled in, or you're doing it more intuitively, or a combination of both?

Sam: Yeah, interesting, because I've been on such a journey with fasting. And I believe definitely that once you embody something, then you can really then start to teach it and start to experience it. So I've loved immersing myself with fasting in all of the different types straightaway. And I went pretty deep pretty quick with fasting. So now, I've taken a step back and I've built such an intuitive relationship with myself that I now know, "Okay, cool, I'm ready to fast."

Yeah, so I think daily, right now, I do a time-restricted feeding routine where I intuitively just need to eat between a six and eight-hour window, which is typically between 10 and 11 a.m. until about 6 p.m. in the days like my optimal. And then at the moment, I probably do an extended fast, maybe three times a year, anywhere between a 5 and 14-day fast, depending on what I need and where I am.

And yeah, I've just built enough of a relationship now to know when my body needs it. If I feel like some sickness or low energy or something is coming on, I know I just need to do a quick little reboot, and fast for three days, and reboot the system, and come back on. So I think it's such an amazing vehicle for me now to be able to just go in and out when I feel the time is right.

And also, what I've learned on this journey is that something that worked for me in the past isn't necessarily what I need right now, depending on my circumstances, my stress levels, my environment. And so I've learned to let go of that like, "Why doesn't this work for me now?" to more of a, "Okay, cool, this is what I'm going through. This is what I need to do. Maybe I need to try something different. Maybe I need to do, uhm, do a bit of uhm cyclic feeding and go in and out, and fast, and then refeed." And so it's just about building that and utilizing fasting for the incredible, adaptable, flexible thing that it is and finding what works for you.

Dr. Jockers: Love it! Yeah, and that's what I've found is, in my experience, I've done both, I've done scheduled and intuitive. And I continue to just as my body needs. And so I think that's what happens over time is you get more and more used to this. And so what are some

final words of inspiration that you can give our listeners?

Sam: I would say you don't know how good you can feel until you can feel it. And so, if you're watching this right now, then there's a reason as to why you're watching. And so trust that. Like trust this process because we get so comfortable feeling like we've got gut issues, and knee pains, and we wake up with a slight headache every day. And that's just the norm now, "Like, that's just what we do because that's life. And we're getting older." "No, like, you don't know how good you can feel until you can feel it."

And so have like faith in that. And I want to be your reason for hope right now that there is so much more on the other side. And all you need to do is to trust this process. If you haven't experienced fasting before, or even if you have, and you're listening to this right now, then perhaps it's the tool that you need or the catalyst that you need like it was in my own life to lead you to that next thing, to give you purpose in life, to give you that space to allow something else to come through, be it a marvelous journey or something different, but I think you don't know how good you can feel until you can feel it. And so keep going and don't settle because there's so much life on the other side.

Dr. Jockers: Yeah, absolutely, I'm with you on that. And, Sam, this has been a great interview. I've absolutely loved your enthusiasm, your passion, just your take on self-love, your commitment to the people, and your community group, and just what you represent while you're on this Planet. So thanks so much for sharing.

And for all the listeners out there, what I want to leave you with is this idea that fasting can truly unlock the dormant healing potential within you. It's safe. It's powerful. And it can truly change your life. And so give it a shot. And we'll see you in a future interview. Be blessed!

Fasting for Younger Women

Guest: Michelle Sands

Dr. Jockers: Well, welcome, everybody, to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. I'm your host, Dr. David Jockers.

And today we're really going to go into what a lot of people think is a controversial topic. It's fasting for women. If you go on the internet, there are a lot of people that will say fasting may be effective for men, but it's going to be really, really challenging for women and really challenging for female hormones.

And, you know, this is something that we really need to discuss and we need to go into detail on, because fasting can be an incredible therapeutic tool for women. But also at the same time, there are a lot of things that may end up causing an increased amount of challenges for the female body as they go into a fasting period. And so in order to cover this topic in detail, I brought on one of the top experts in this topic.

This is Dr. Michelle Sands. And she is the number one natural physician for high achieving moms who wish to optimize their health, wealth, and happiness. She runs metabolicmama.com. And she has got some great programs, a twenty-one day metabolic rehab program, and the GLOW protocol. And so, Michelle, welcome to the Fasting Transformation Summit.

Michelle: Thank you so much for having me. I am so excited to speak on this

topic. And I just think it is so controversial. And it's so easy for women to feel like it's not an option for them. So I'm so glad that you're talking about this.

Dr. Jockers: Yea, for sure. And I know that we had spoken at a conference, and you were telling me about your experience with fasting. It really intrigued me, and I wanted to bring you on the summit so you can share this. And let's start by just talking about how you got into natural health, and in particular how you started doing health coaching with high achieving mothers.

Michelle: Yea, so most of us have a reason, like an underlying reason why we do what we do. And a lot of us have a story that's attached to it. I grew up in a family that really didn't understand what health was and didn't really know anything about nutrition.

And so we lived in an Italian family in New York. So we were on the three-P diet basically, pizza, pastas, and pastries. That was just what we ate. Pretty much every meal had like seven different types of carbs. We had bread and pasta and pizza. And there was always something, rarely any fresh fruits or vegetables. But my mom was just feeding us. She was just doing what she had been taught and what she knew.

And so I kind of grew up being a little bit chubby. After I ate, I would look around at my family, and my dad would unbuckle his belt and usually go take a nap. And so I decided, well okay, everyone kind of feels a little bit crappy after they eat. So it's pretty normal, right? That's just what I learned by watching everybody else. You know, people weren't sleeping well. Skin problems, anxiety, depression were all pretty common in my family. So that was just my frame of reference. That was just how people were supposed to feel.

But as I got into junior high, I started wanting to fit in with the other girls. Like I said, I was a little chubby. I had acne issues. I always had digestive problems. And so the only thing I could think to do was join the track team. Now I was not athletic at all. But I was like I was going to have to run so I can lose some weight so I can get someone to take me to the dance basically.

So I joined the track team. And my track coach, she was so different from my family, because she was like upbeat and happy. And she was athletic and she was really positive. And so she kind of saw what I was trying to do, and she took me under her wing.

She started teaching me about nutrition, basically about eating fruits and vegetables. That kind of fuels your body and you'll feel better. And she talked to me about sleep and exercise. And so I started doing anything in my power that I could to try to make a little bit of change

despite my circumstances.

So I would go to school with my lunch. And my mom would pack me this amazing dream lunch for kids. It would be a can of soda. It would be a bag of Doritos, a Hostess snack cake, usually some type of little candy bar, and then a bologna sandwich. So that's kind of like the downer of the lunch. But I would actually trade that off to other kids. So I would get like carrots and celery for my Doritos and get an apple or an orange for my little Hostess snack cake. I would usually get milk or juice for my soda. And then I would just toss the bologna sandwich because nobody wanted that anyway.

But that was really kind of how I started getting into like learning about health. And I was able to start running a little faster. I did lose a little bit of weight. I still had to navigate around my mom at home feeding me that crap. But it was my little way of getting to make a change in my health.

And so I actually started getting good at track. And so I got a track scholarship to college, which was really the only way I was going to go to college. And it was the second year on the track team. Every year at the beginning of the season we basically had to go for a physical. So they checked our pulse and our height and our weight and all of these things.

And while I was in my physical, I just started breaking down with a nurse assistant, and it was a guy. And I just started crying to him about my periods were hurting, and I had digestive issues. And all these things I was just blurting out. It was just like I was letting out everything that had been bothering me. I was running on the track team, and I was getting really good grades and losing weight. So from the outside in, I had it all going on.

But I was really living on ibuprofen. I would get up in the morning, and I would take five or six ibuprofen just so that I could get up and function. And then I wouldn't eat until after my afternoon track practice. I wouldn't eat until like three or four p.m., because if I ate I would end up having digestive issues. I would end up either pooping in my pants or not being able to run. And so this was kind of the lifestyle that I got myself into.

And then I would have to take more Advil after I ran. I had to take something to help me fall asleep at night. I had to take something to help me wake up in the morning. And I had Tums on my dresser in my dorm because I would just have to eat that every time I tried to eat anything basically.

So I'm telling all of this to a physician's assistant. And he's just looking at me like I'm just here to take your blood and your pulse. I don't deal with this kind of stuff. But I was like crying like pretty uncontrollably and

making a pretty big scene in there. But they got the nurses over, and they brought me aside and they talked to me for a little bit. And they talked me into going to see the doctor at the clinic the next day.

So I went. They did a bunch of tests. They did my blood tests, and they asked me a bunch of questions. And they said come back in a couple of days and they would have the results. So when I went back in a couple of days, they told me basically, okay, it's not going to be in the cards for you to have children, so we hope that's not something you want to do. They told me that my ovaries had failed, that I basically was not producing any eggs, even though I was having periods.

And it was kind of obvious things. They didn't give me any answers. They didn't give me any way to fix it. I was kind of like a logical person. I always liked science, and I was always asking for the solution. And I'm like what's the solution? And they said you have to be on an IBS medication and just be on the birth control pill for the rest of my life. So that was my solution.

And it just kind of crushed me. Even though I was only twenty years old and I wasn't planning to start a family right then, I knew from the time I was little, when I got my first baby doll, I wanted to be a mom. So that news just really crushed me.

And I didn't tell anybody about it. I didn't tell my mom. I didn't tell my friends. I just kind of sulked about it. I just kind of sat in my dorm for a few days. I didn't go to classes. I didn't do anything. I just felt broken, like I wasn't a woman. I couldn't do something that every other woman wanted to do and that every other woman could do. And so it really kind of broke me.

And then every year at Mother's Day, like the whole week before, you would see all those commercials about the relationship between kids and their mom. And you would see all the pictures of the moms and their families. And I had to stay away from everything, from media and from going out, that whole week for three years in a row, because I just couldn't handle it.

And so it was like the third year, after Mother's Day, I decided, you know what, I am pretty good at solving problems. So why can I not solve this problem? So even though I was in the marketing department at school, I went over the health department and science department and started talking to all the professors. And I started asking them have they heard of this? Is there any way you can come back from this? Like what's going on with me?

And some of the doctors had some advice, like some hormone therapies that I can do. And some of the professors were talking about Eastern

medicine, energy medicine, and meditation and all these things. So for the next two or three years, I did all the things. I did biofeedback therapy. I did meditation. I did hormone therapy. I did [inaudible]. I did everything. And I took one step forward and two steps back. Like I started to feel a little better, but it never really got better.

And so then I decided to enroll in naturopathic medical school and figure it out myself. And so I went back to school. And it took me a long time because I was really focusing on my hormones, because I had a hormone problem. And so I was just trying to figure out all the things about hormones. I was really disregarding everything else about the body. But in medical studies, I was forced to learn about the whole body. And I started learning about how your gut and immune system are connected to your hormones, and how your detoxification system is connected to your hormones, and all these things.

And so I was doing a bunch of tests on myself, because I had access to testing now. I was doing every test I could on myself. And I actually found out that I had celiac disease. And here's a person who grew up all her life eating gluten. And back when I was born in the 1970s, like no one knew what celiac disease was. Even when I was in school, it wasn't something that you could really just Google, and no one really talked about it. So I still wasn't even sure how this affected my hormones. But I knew that was something that was a problem, so I started eliminating gluten.

And then I also found out I had Hashimoto's thyroiditis. So that was also connected a little bit to the gluten as well. So I started going on a paleo style autoimmune diet. It wasn't really called paleo back then. It was just an anti-inflammatory diet. And now I'm coming to understand looking back, oh, I was eating paleo. And so I started doing that.

And then later I also found out I had heavy metal toxicity from all my mercury fillings. And so all of these things were kind of snowballing to cause these imbalances in my body that ended up really messing with my hormones.

And so through it all, I kind of just forgot about working on my hormones. So I kind of said, okay, my hormones are not going to get fixed. I may need to fix all these other things so I can start having better digestion and start sleeping better. I can start having clearer skin. And all these things started coming together.

And then I met my husband. And we just kind of talked about it. Like he knew I couldn't have children. But we talked about it. Like let's just try, because you're actually starting to feel better. Your periods are getting more normal. Maybe you can have children. So we only tried three times, and then my son was conceived. And I have a three-year-old son

now, no IVF, no interventions whatsoever. It was only healing my body and then healing my hormones as a result.

Dr. Jockers: Yea, that's amazing. It actually reminds me a lot of my wife's story, too, because she was diagnosed with endometriosis and was told she would have a lot of trouble having a child. And when I met her I started her on a detox program and helped her to stabilize her blood sugar and a lot of the strategies that I'm sure that you use and that I have talked about a little bit in the summit. And we got married, and she actually conceived about six weeks after we got married. So now we have actually three kids. And so, yes, it's definitely possible that this infertility epidemic that we have, it's certainly possible to overcome it. You're a living proof of that. My wife is as well.

Michelle: Yea, and you know, it's really any problem, too. Like for me, it was infertility. But I have so many clients and patients I work with where it's diabetes. You're going to be on diabetes medications for the rest of your life. Or it's thyroid issues, or it's autoimmunity, all these things.

Conventional medicine, they're doing their best. I have a lot of great friends that are conventional medicine doctors. And they get into it for the same reason I got into it, because they want to help people. But their tools are really drugs and surgery. So a lot of times you're given a drug, and that is the end of it. That's the treatment. Drugs are essential sometimes to help people get to a point where they can heal, but they're not actual healing. And so a lot of times we're leaving out the important part of healing the body.

And we're just looking at those medications as the end game. And if I were to stop with the medications as my end game, I wouldn't have my son now. And I probably wouldn't have my practice, because I didn't have the mental capacity and the physical energy to even do what I do today.

Dr. Jockers: Yea, for sure. I mean you went deep, and you got to the root cause of the problem and were able to correct and stabilize it. Now, at this point, you really specialize in helping women, particularly high achieving busy moms. And how did you kind of move your practice towards that? Like why did you specialize in that?

Michelle: Yea, so, honestly, my practice is virtual now. And that was really out of necessity, because I wanted to be home with my son. And so I got through medical school, and I had my son. And then I thought, am I going to practice medicine, or am I going to stay home and be a mom? And I looked at some of the other doctors that I kind of befriended and I followed online. And I saw what they were doing online. So I was like, okay. So that's how I got the online part. I wanted to have the lifestyle and [inaudible] to do that.

But I'm a high achieving woman. Like I am someone who knows what I want and I'm going to go after it. And I just needed the tools. And so I work with a lot of women that are very much like myself, because I like working with women that I like to hang out with and that I'm on the same page and we're speaking the same language. And so I can more effectively help those women.

But they're also the most fun to work with because they only need a little bit of help. They need a little bit of support, and they need some tools. And then they can take it the rest of the way. And so that's really why I like working with those women, because they have phenomenal results.

Dr. Jockers: Yea, that makes a lot of sense. And you speak the same language, because you're living that lifestyle. You're in the trenches. I know having three kids, it's like every day is a challenge for my wife, especially as I have three kids under three right now. It's a challenge. I'm listening to them actually throwing a temper tantrum upstairs while I'm doing this interview.

Michelle: My heart goes out to you.

Dr. Jockers: Both of my twin boys throwing a temper tantrum upstairs while I'm doing this interview. So it's like, you know, you've got a son. And it's one of those things where you can speak the language. You know the stressors that moms are under. When I was single, the first seven years of seeing patients, I could not relate with moms or dads with kids, because I didn't have any kids.

Michelle: I totally hear you. I used to wonder why they were cancelling appointments. Like what do you mean you can't keep an appointment? Get it together. And then now I have a three-year-old, and I'm like, oh, I got to cancel the appointment, right? So now I know that flexibility is so important. It's so crazy.

Dr. Jockers: Yea, it's super key. And so let's jump into our topic. We talked about fasting for women. It's a controversial topic. Why do you think that is? And what should people know when it comes to fasting?

Michelle: Fasting is very controversial. And if you Google fasting for women, we actually did this recently. And I Googled fasting for women, and I got a lot of the dangers of fasting for women. And most of the studies that are done on fasting are done on men. And a lot of the benefits of fasting are benefits that we see in men.

However, in women the studies are more geared toward the dangers of fasting. And there's a particular study that's referenced over and over again. It's a rat study. And in the rat study the rats were divided into two different groups. And there were female rats. And so the one group of

rats was able to eat whenever they wanted. And then the second group of rats was only allowed to eat every other day. So they would fast for a whole day, and then they would eat as they wanted for the next day. And they did this for two weeks.

Now, one thing to note is that when a rat is fasting for twenty-four hours, that is equal in rat time to a week. So this is not translating properly to women fasting for twenty-four hours. This would be like women fasting for a week, and then doing this every other week for seven weeks. That's a lot of fasting. And so that can be damaging for us women, and even for men, hormonally and just nutritionally.

So the study, what it shows is that when this happens, because women are more sensitive to the hunger hormones. So when we fast, our brain will say, oh my gosh, there's no food coming in. So it will actually send messages to our body using leptin and ghrelin, which are our hunger hormones, to tell us to eat. That's our body's survival system. So we all have that built in.

Women are a little bit more sensitive to those hormones. And this is just because women carry babies. And so it's our evolutionary way of protecting the fetus. And whether or not you're pregnant, as a woman we're going to have this higher sensitivity to these hunger hormones. And so that's one reason why women have a harder time with fasting long term than men do.

Now when the fasting goes on, these hunger hormones can inhibit the message from the brain to the ovaries to ovulate. So sometimes if the fasting is extended for too long, then it can decrease fertility. It can shrink the ovaries, and it can cause some issues with luteinizing hormones, all of the things that are important for creating a baby. However, if you're not fasting for weeks at a time, if you're doing intermittent fasting, or twenty-four hour fasting, or even a five-day block fast once every quarter or once a month while you're trying to improve your health, then that is perfectly safe. And it's actually very beneficial.

Especially in my practice, I work with a lot of women who are over thirty-five, so perimenopausal, menopausal, and also some women with PCOS and women who are trying to get pregnant. So the women with PCOS, women with insulin resistance, pre-diabetes, diabetes, women who are perimenopausal and menopausal, because as we get older as women we lose our insulin sensitivity, so we become more prone to diabetes, prone to insulin resistance; so these populations really benefit from the fasting as opposed to the negative effects of fasting.

And then when we talk about fasting, too, I think it's really important to note that I really don't feel that what most people consider intermittent fasting, like stopping eating at 7 p.m. and then eating again at 7 a.m.,

that to me is not fasting. That's not a strategy or dietary strategy. That's just being a human. We're not meant to be eating twenty-four hours. We're not meant to be eating late at night and then again at 6 in the morning. That's really detrimental to our health.

As humans, we evolved to have times of feast and times of famine. So we're meant to eat at periods of time. And then we're meant to not eat as well as periods of time. So just normal human life should have some component of what we now call intermittent fasting in there. However, that should be normal. Everybody should do it, whether you're looking to get pregnant, not looking to get pregnant, man or woman, old or young, everybody should have a time period where they don't eat. So that's just a given.

However, if you're looking to improve human growth hormone, which is our youth hormone, the hormone that helps us build muscle and burn fat, build bone, help us with our skin and our hair and our nails, stay youthful; if you're looking to increase that, fasting for even just five days can double that human growth hormone. So that's like one little hack that people can do that's free.

You don't have to go get injections at the anti-aging clinic and spend two-thousand dollars a month. You don't have to take a bunch of amino acids or even go underground with what body builders do and do it illegally. You can just fast, and you're going to double that. Also, if you're dealing with diabetes or pre-diabetes, that's going to benefit from doing a more extended fast.

So maybe instead of a twelve-hour fast, go for a sixteen hour fast, like skipping breakfast, or a twenty-four hour fast. That sounds scary, but most people don't think about a twenty-four hour fast as you eat dinner and then you don't eat again until dinner the next day. So you're not really going a whole day without fasting, but it's so effective for your insulin sensitivity, your human growth hormone, and just your overall digestive GI.

When you don't eat, I think about fasting as like when the highway needs repairs. So there are a lot of potholes on the freeway. And they can't ever repair those potholes if the cars keep going through. So you have to block it off, stop the traffic, and then they can repair it. Well, it's the same thing with your intestines, your microbiome. It can't restore and repair itself if you have leaky gut or you have infections in your gut. You can't really repair those if you're constantly sending food through it.

So you have to stop. Your body has an amazing regeneration/repair/renewal system. But it needs to be able to do it. So if you just stop eating for a period of time and let your body do its thing, you're actually going to recreate. Different bacteria are going to grow, you're going to have a repopulation of your microbiome, and you're going to be able to heal

and really restore and regenerate.

Dr. Jockers: Yea, that's really great information, Michelle. And, you know, there's a 2007 study that talks about when they fasted women for twenty-four hours, it showed a 1200 percent increase in human growth hormone, right? So it was just gigantic.

Michelle: That's huge. It's huge.

Dr. Jockers: That's a huge, huge change. And that's going to help the body build body tissue, burn fat, build stronger bones, help support the immune system, and reduce inflammation. So there are a lot of great benefits to that.

Now let's talk about female hormones in particular. And especially let's talk about like a woman who's having a menstrual cycle. And how could fasting impact that? And let's say the positives and negatives of that.

Michelle: Yea, so this is something that I actually have been using myself and in my practice for women who have a lot of cramping, like PMS, and difficult heavy bleeding, periods that just kind of such, like periods that make you want to have to stay home from work because it's just taking over your life. Fasting the week before, or at least two weeks before your period, will actually reduce prolactin.

And so prolactin, that's an important hormone for women who are lactating or breastfeeding. It helps you produce breast milk. But also increased prolactin levels increase inflammation and can increase cramping and the pain that you experience with your period. Now when you fast ahead of your cycle, like in the week or two weeks before, you don't have to fast every day, but if you do some intermittent fasting, or maybe a twenty-four hour fast, or you get a two or three day fast in there.

When I'm talking about this, if you've never fasted before, start with a sixteen hour fast. Do that for a few weeks. Maybe do it one day a week. Then add it in for a couple of days. Then you can work up to twenty-four hours. So you never have to jump right in. Anything you do is going to be an improvement. So I don't want to scare anybody when I say a three day fast.

Like you're definitely going to start it if you're a person that eats in the middle of the night. Just start by not eating at night. And then you're going to gradually just increase until you're in your comfort zone, until you get the results that you need.

But doing some fasting within that week or two before is really exceptional for reducing the prolactin levels and also just improving how you feel during the week that you're bleeding. And then also the week

before, just like the cravings and the irritability, it all kind of reduces, which is really amazing. And then for people who have irregular periods, sometimes it really is PCOS or endometriosis or another issue. Fasting can actually really help the body to recalibrate and get those cycles back in order.

However, if someone is on the thin side, if someone is going towards a more malnourished state, someone who has any history of anorexia or bulimia, their fasting can actually stop their periods. So they can actually be the opposite effect. So it really has to be individualized for the person, and really look at the rest of what's going on for health. But it can be very beneficial for improving the length and the flow and just how you feel during your period and the premenstrual syndrome, as well.

Dr. Jockers: That's really, really good to know. I mean I didn't even know that about [inaudible]. And so I think that's fantastic information. And yea, we've been saying this throughout the summit, if you have a history of an eating disorder, definitely don't try to do an extreme fast or anything like that.

And a great place to start is twelve hours between your last meal and your first, kind of like what you were saying. It's like being human. Like start with 7 p.m. to 7 a.m., something along those lines. It's a really great place to start, and it's a really safe place for most people.

And then again, if you don't have an issue with an eating disorder, start to extend that to maybe a sixteen hour fast and try that once, twice, maybe even three times a week, right? And that can be kind of the next step up for you. And like you were saying, doing that about a week before menstruation can have this really powerful effect at reducing a lot of these unwanted symptoms.

Michelle: Yea, it's pretty amazing. And then also another thing that we've seen in our practice, we use both just regular fasting and also the fasting mimicking diet, which is just a small amount of food that is designed to fly under the radar of your body so that it thinks you're fasting. You may have had somebody talk about that on the summit. It's called ProLon, and it's prepackaged. It's been studied on many clinical trials. The certain makeup of a food is designed to fly under the radar.

So I've had some women who have done that for five days. It's a five day, very low calorie, fasting-mimicking diet. And then I've also had women who have done just regular water fasting for three to five days. And in that population of women, we've seen a reduction in thyroid antibodies as well. And I don't really have a study to explain why, but what we've noticed is improvement in gut health and the gut microbiome. So we really think that it is contributing to reduction of leaky gut and those

antibodies not getting through. So that's been really effective as well.

Dr. Jockers: Yea, really, really powerful. I mean we know that fasting, you're going to increase your ketones, right? And that's going to start to reduce the inflammasomes' genetic pathway of inflammation. That can play a big role of what's going on there with the antibodies as well. So it's a great way. Really the most powerful nutritional strategy to reduce inflammation is fasting.

But again, if you haven't fasted before and you jump into an extended fast, it's kind of like running a marathon when you've never trained before. It can be a little too much for you to start. So you're going to want to graduate your way in. And the fasting-mimicking diet is one way to do that, where you're still consuming food, but that food is not impacting your insulin levels, and it's calorie restricted. And it's also actually low protein.

Michelle: That's an important part.

Dr. Jockers: Some of your pathways, your mTOR pathway as well, and that's going to have a powerful anti-inflammatory effect. And so, yea, you have experience working with women with that, and you've seen good results with that?

Michelle: Oh yea, definitely. And it's a lot easier to sell. As I see someone who has insulin resistance or they're dealing with issues with their periods or even menopausal symptoms, a lot of times it's hard to get them to just not eat for five days, right? That's a real hard sell for me. But if I give them this nice prepackaged thing, you actually get three meals. So you get a bar for breakfast. You get two soups. You get some snacks. So it's not too bad. So people can actually stay with it, and it's really empowering.

Even for people who have some addictive personalities around food, people who are emotional eating and binge eating, this gives a little bit of a reset to empower them to see that's not in control of them. They're not controlled by the food. So there are so many benefits really to this. And like you said, that's one way to do it, to ease into fasting. But also do a ketogenic diet. Like you have a couple of ketogenic programs. That is a great way to actually prep your body to go into a fast. And we've seen some great results with that as well.

Dr. Jockers: Yea, yea, for sure. Going back to the female menstrual cycle, you were saying one of the best times to fast would be about a week before menstruation, because it affects your prolactin levels, which is going to help reduce unwanted symptoms. Now how about actually during a menstrual cycle? Is that a good time, not a good time? What have you seen with that?

Michelle: You know, that's really individualized, because some women have just a harder time fasting during the menstrual cycle and even sometimes a couple of days before as well. You have to kind of know yourself. If you know that you always crave food and you have a higher need to eat during those times, especially if you're a beginner, that's probably not the best time to start fasting.

For myself, because I have fasted quite a bit, it doesn't matter for me. I can fast during my period perfectly fine. But for most women, it's not because it's bad for you, it's just more challenging to actually stay compliant with it.

Dr. Jockers: Yea, absolutely. That's what I've heard from a lot of women, obviously not everybody, like you were saying, but a lot of women have more cravings during that period of time. And to me it makes sense. You're losing blood, right? So you're losing a lot of vital nutrients when you're losing blood. So you may need more, right?

Michelle: Exactly. And I believe that there are seasons of our life and seasons of our cycle. And that is a time where you want to be more restorative. So you want to be more nourishing to your body. You want to allow for more rest, recovery, and recuperation. And so being really in tune with what your body needs is another important strategy for just optimizing your health and knowing your body, listening to your body.

Dr. Jockers: Yea, for sure. And a big thing that I've recommended for female clients is bone broth during the cycle, because it's like we make our red blood cells in our bone marrow. And so getting all those supportive nutrients from the bone marrow is not only good for the gut, but does provide some calories to help stabilize our blood sugar, and it provides really key nutrients that we need in order to produce blood cells.

So I've seen a lot of people do well with, instead of just doing a full intermittent fast for sixteen hours, instead they do like sixteen ounces of bone broth in the morning. And then they eat two to three meals between an eight hour eating window, or something like that outside of that. So have you experimented with that?

Michelle: Yea. And there are plenty of ways to play with it. But I know that there a lot of people online that will say you're not fasting right, or you're not doing it right. It really depends on your goals. Like if your goals are increasing your insulin sensitivity, maybe losing a little weight, having more energy, regulating your sleep, then yea, adding in some bone broth, having some teas, doing it like that, is going to make it a lot easier. It's going to be more nourishing for your body, and it's not going to be such a shock.

But if you're looking for like stem cell regeneration, those types of things that come with really a strict water fast, or the fasting mimicking diet specifically, you're not going to get those same benefits, all the benefits. But you're going to get a lot of it from doing bone broth. So, yea, it really depends on your goals and what you need. So if you're working with someone, make sure you explain what the outcomes that you want are and they'll be able to guide you for the right way to fast for you.

Dr. Jockers: Yea, absolutely. And I think the goal is always to help people have a good experience with it, right? So they can come back to it and use this as a regular tool in their tool belt and not have this terrible experience where they swear off of it for the rest of their life, right? So I know you've had some good experiences. You were sharing with me about fasting. And so let's talk about that.

Michelle: Yea. I actually started kind of down this journey when I was doing Ironman triathlons and long distance running. And even though I had healed a lot of my digestive problems, you know like the runners have those Dew packets and all of those like fake, sugar laden, peppy, energy stuff, whenever I would use those on a run, I would have digestive issues. So I was trying to find a way that I can get through a hundred mile run without having to refuel as much.

So I started doing the ketogenic diet for three months before my hundred mile race around Lake Tahoe. And my goal was that I would just use some fats during the race to fuel myself so that I wouldn't have those adjust issues. So I primed my body for three months with a strict ketogenic diet. But what happened was I noticed I wasn't as hungry all the time. So I would forget often to eat dinner, or I would forget to eat like breakfast and lunch while I was on the ketogenic diet.

So I realized kind of by default I was doing fasting. So this kind of intrigued me. It was kind of cool doing fasting. And my joint pain that I had when totally started diminishing when I was doing my fasting and the ketogenic diet. So I was doing both. And I actually did the race. I only fueled on some nuts and some coconut oil and a couple of things like that. So I was able to get through the entire race. And then after that I decided I was going to try to start investigating fasting.

So I started like a five-day fast. And I ended up doing it a couple of weeks before my menstrual cycle. And what I noticed was it wasn't as heavy. I didn't have like cramping. I didn't have the breast tenderness that I did before. And so I was like, oh, I think I'm onto something. So I would skip a couple of months and I would do it again and noticed the same effects. And when I started doing it with some of my clients, they noticed the same effects. So this was really cool.

Another strategy that I used fasting for often times is when I'm traveling.

So a lot of the times when you're traveling, you just don't have good choices for what to eat, especially if you're in an airport or if you're at a conference. And so I actually used fasting. I will purposefully fast during those times so I don't have to make the bad choices. And so it's just another tool that I use, because I know that my body doesn't need to be fueled. And so that way I can actually keep my cleaner diet while I'm in the airport or traveling to places where I don't have much control over what is served.

Dr. Jockers: Yea, I'm with you on that. Like anytime I travel, I'm always fasting. I really don't ever bring snacks. I just get to wherever I'm going, and then I'm usually stopping at Whole Foods or a place like that.

Michelle: Exactly. A lot of times people just feel that they have to eat. So you have to make a bad choice. And actually you don't have to eat. You can go a day or half a day and you're not going to die. And you'll actually notice that you become more efficient. And your brain actually works better. And you probably have people talking about the mental benefit of fasting on this summit, and it is very, very true. You can actually focus so much better because your brain actually has more energy.

It takes a lot of energy to digest food. And it takes like between sixty and seventy percent of our energy that we have digesting food. And if we're not doing that, we're able to divert our energy to healing, to growing new tissue and to our brain, so we can actually focus better. And a lot of people who deal with brain fog or anxiety, this is very helpful for them.

Dr. Jockers: I found it to be extremely helpful for really good performance. And emotional balance, too, I found it to be really, really good for. And you feel so much more balanced and stable. I don't react to stress as much when I'm consistently incorporating fasting into my lifestyle.

Michelle: It's so true, so true. It's so powerful. And it's so funny, because I studied naturopathic medicine in school. And fasting has been a therapy for thousands and thousands of years in naturopathic medicine. And only now has it become a little popular for mainstream people. But it's something that we've been taught and we've been using for thousands of years.

Dr. Jockers: Yea, exactly. That's why I start every interview and I let the listeners know that fasting is really the most ancient, inexpensive (obviously it doesn't cost you anything), and in my opinion the most powerful healing strategy known to mankind. And so now we have to relearn it.

They say that the illiterate in the twenty-first century are not those who can't read and write. Most people can, and obviously if you're in a first

world country, you probably can or you wouldn't be listening to this. But instead it's those people who can't learn something and realize that it's no longer serving you or benefiting you, and then choose to actually relearn these strategies.

And fasting is something that all humans have had to do throughout the course of mankind up until really our generation, because we just have food everywhere. I mean I don't even need to go to the grocery store. I have like a week's worth of food. I could literally eat all day long and my family could in our house. I have to be intentional about not eating. That's really new when it comes to mankind. It's a great place to be. It's great to have all this food.

But we need to learn these kinds of health and healing strategies. So let's talk about precautions and preparation steps that you recommend for people, particularly women, before they begin a fast.

Michelle: Yea, so, like we kind of touched on earlier, preparing your body with shifting the way that you eat, preparing by shifting away from, of course, the processed, packaged foods. You want to shift away to a more whole foods diet. That's where you're going to start. Like if you're someone who isn't there yet, don't go into fasting yet. Start with eating whole real foods.

Shift over to a higher fat, lower carb diet, because that's going to make it easier for you. Glucose, you burn it and then you have to replace. Where fat, you have tons of fat on your body, so your body can actually sustain for much longer if you're a fat burner. So you have to switch over to that process. And then there can be a little bit of a period where you may not feel as alert, you may have a headache, and you may feel a little sick.

So I would rather you do that while you're actually eating food, eating a higher fat, low carb diet. I would rather you have that kind of keto flu, that kind of symptoms while you're eating, than while you're fasting and you think there's something wrong and you're going to die. And so I like for people to go for more of a ketogenic style diet first, if possible.

If not, you can jump right into fasting. I had one client who just said, "Can I just jump into fasting?" Her blood sugar was 287 for the longest time. Her doctor was really wanting to put her on medication for diabetes. And so right now go ahead, you can just start fasting. So she just did. She was very determined, very alert and aware of what she was doing.

And first she started with a three day fast. And then the next week she did a five day fast. And she lowered her blood sugars to 104, and it was stable for a really long time. And so she didn't want to prolong and she wanted to get results right away. That is possible. But you have to be the kind of person that will just stick with it and know that you might have

sometimes where you might need to rest.

So I like to do preparing. Try not to do your first fast when you have a super busy week, when you're under a deadline, when you're having to take your kids to so many different places. Try to make it a not so stressful week. Try to make it a time when you can actually get a lot more rest. Maybe you can do some reading, some meditation. You can go out in the sunshine. Do things that are more restorative that week.

That's going to put you in a better position to succeed than if you have to stay up late to get a project done, and you've got to get up early to get your kids to school, and you're just fretting. That's not the best situation. But it is good if you're staying busy. So if you're staying busy, but with low stress, that's going to be your best scenario.

Make sure you're drinking a lot of water. That's really important. And if you're intermittent fasting, really make sure you're getting high quality food in when you are eating, because we talked a lot about the not eating part. But the eating part is important, too. What you're eating when you are eating should be like high nutrient density.

You should have a good amount of fat to sustain you through those periods of fasting, and moderate protein. I think protein is overrated. We have so much protein. People think that we need to have giant steaks and giant pieces of protein.

But you just need moderate protein, because your body is going to be using fat for fuel. So I think that's important as well. And make sure that when you're eating, you're eating healthy, whole, nutrient dense foods, whether before a block fast or during an intermittent fast.

Dr. Jockers: Yea, those are really great tips. You've got to make sure you're getting all your micronutrients in. So you want the trace mineral rich foods, nutrient dense foods. Let's talk about a block fast, or let's say, an extended water fast. What are some of the best ways to break that? You know, you've done five day water fasts. And when you came off the fast, did you just go and eat like a big steak?

Michelle: Well the first time I did. The first time I just went and I started eating, like I just wanted to eat so bad. So I was eating like my kid's goldfish pack. I was eating like bad fat. And, you know, I felt like I deserved that, like I could eat anything. And that did not work. I was in the bathroom for a very long time. I did not feel good at all.

That's because your body doesn't have all your enzymes ready. And your body is just not ready for food, because you've kind of trained it that it's not getting food. So you really have to ease in, like a very small bit. I like to start with bone broth. If you're not vegetarian, bone broth is probably

the best thing to start with.

Dr. Jockers: If you are vegetarian, you can do vegetable broth.

Michelle: Yes, exactly. That's what I was going to say, like vegetable broth is good. And you can alternate between the two, either way. Sometimes I like to have some vegetable broth and some bone broth. I like to start with that first. And then I might do a very little bit of steamed vegetables in the evening that day. It depends on how I feel. Sometimes I'll just stick with the bone broth.

And then over the next few days, I'll just gradually add in more vegetables, steamed, so I don't have to break them down as much. I might add in a little bit of like juicy fruit, like watermelon or fruits that have a lot of water in them. Sometimes I don't if I'm going back into a keto situation. So sometimes I'll come off a fast and then eat ketogenically for a couple of weeks before I incorporate back into my regular normal pattern of eating just whole real food.

But other than that, I'll do some fruit as well. And then over the next few days I'll just gradually build up to where now I'm eating some protein and some more variety of food. But it has to be really slow and gradual, and just kind of listen to your body. You know, also using some sea salt and some Himalayan salt is helpful to kind of bring back your electrolyte balance as well. So I like to do that as well. Some people say you need to do it during fasting. But I actually don't think it's necessary to add salts during a fast. Your body actually has everything it needs.

Dr. Jockers: Yea. I totally agree with that. And I typically recommend like at least a two to one ratio. For every two days fasting, you want to give yourself one recovery day. By recovery I mean you're not trying to eat like a big steak or something like that, foods that are harder on the digestive tract, like really thick meats. You want to give your body time, because the digestive system, like you said, has been shut down, so you're not producing stomach acid, bile, and pancreatic enzymes. You've got to teach it to do it.

And you're right. Like it's a great time to bring in fruit or enzyme rich foods, steamed vegetables, particularly like cruciferous vegetables, because those can be really tough on the digestive system. Their hard, outer cellulose can be tough to break down. If you're going to do raw, you might do maybe salads, things like that. Or salad greens can be really good. Some people are really big advocates of doing a lot of raw foods when you first come back.

Michelle: Yea, enzyme rich. I just find sometimes some people do have trouble breaking down raw foods.

Dr. Jockers: Absolutely. You know, I'm somebody that cruciferous vegetables, if they're not steamed, my system is not going to agree with those. So if you do raw, things like cucumbers are good, celery, and green leafy vegetables, stuff like that, so adding that in. Some fermented foods, are you big on like kimchi or pickles?

Michelle: Yea, I like adding a little bit of fermented food. I have a lot of clients that don't like the taste of sauerkraut. So I just have them do a teaspoon of the juice of sauerkraut with every meal. And so that is actually all you need to really start bringing back some probiotics into your system. And also using some digestive enzymes when you do eat can be helpful as well.

Dr. Jockers: Yes, I'm a huge fan of digestive enzymes. There's not a meal that goes by where I'm not taking them. It helps support my system, you know. It just takes stress off your gut. Anytime you can do that, it's always going to be helpful. You know, one thing I'll often times do is like I just did a four day fast. And it was like I was going to do a fifth day, but I felt so good and I felt like I needed to work out. So I lifted weights. And then I broke the fast with a protein shake later in the day. And that was actually really easy on my system, because there was a blender that had already done digestion.

Michelle: That's very interesting. I never actually thought about doing that. But now when you say that, it's like pre-digested protein. So maybe I'll try that on my next fast and see how it goes.

Dr. Jockers: Yea, I felt good. I felt like I recovered really, really well. I felt amazing. I still feel amazing. It was just two weeks ago when I finished it. So I still feel really, really good from that. So that's one of the benefits of fasting. You get the autophagy and the growth hormone release and all the cellular cleanup. And it can last typically several weeks, if not a month, where you just feel this higher level of energy, brain function, mental clarity when you do it right and you break it right, like you've been talking about.

Michelle: Yea, it's so important. I love the way you said you were going to do a five day fast, but you decided to do a four day fast. I think that's really important, like listening to your body. And just because you said you were going to go five days doesn't mean you have to force yourself to do five. Be happy and be like in tune with what your body needs. If you are ready to work out and you're ready to nourish your body, that is exactly what you needed at that point in time.

Dr. Jockers: Yea. And that's a big thing I'm a fan of. It's just being intuitive, right? You want to push your system. You want to try new things and implement some of these strategies that our ancestors did. But at the same time, like you said, just be intuitive and kind of listening

to the message of your body is key.

And so this has been a great interview, Michelle. You really covered a lot of incredible information. And I think this has been extremely helpful for the women, especially younger women out there that may be menstruating now, knowing some good strategies and how to implement and how to get started with fasting, when to do it. So I'm so thankful for you coming on and sharing your wisdom. And what kind of final words of inspiration do you have for our listeners. And where can they find out more about you?

Michelle: Yea, one thing that I want to tell you guys is a story about my track coach. One thing that she said to me, it still stays true to me these days. And what she said was your body can do anything you want it to do. All you need to do is feed it, train it, and believe in it. And I think that that applies across the board to whatever you're working on right now. Your body can really do anything that you want it to do if you give it the nourishment it needs, you give it the movement that it craves, and then you believe in your body and what it can do.

Dr. Jockers: Yea, I love that, love it. And you've got some great programs. People can find you at what, metabolicmamma.com?

Michelle: Yea, metabolicmamma.com, or glownaturalmedicine.com.

Dr. Jockers: Yea, perfect. Well thanks so much. And just to reiterate what you were saying, for all the listeners out there, your body has this incredible dormant healing potential. So no matter what you're struggling with, if you're struggling with chronic health issues, it's because the healing power within you is lying dormant. It's not fully active. It's trying to do the best it can. But it's being suppressed. And fasting has the ability to unlock that dormant healing potential. It is safe, it's powerful, and it just might transform your life.

So hopefully you got value out of today's interview. And if you're getting value out of these interviews, I'd really like to encourage you to consider owning the entire Fasting Transformation Summit for yourself. That way you get lifetime access to these interviews.

These are especially helpful to be listening to when you're trying to start a fast, because they can help encourage you, support you, give you hope and just give you inspiration to be able to carry it out and implement these strategies into your lifestyle. So if you would consider owning it for yourself, that way you get the transcripts, you get the interviews, all the bonuses, I think it will add incredible value to your library. And we would be honored if you took this home and kept it for yourself. So consider that, and we'll see you on a future interview. Be blessed.

Intermittent Fasting for Menopausal Women

Guest: Marcelle Pick, OB-GYN, NP

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We are talking about fasting. And I'm your host, Dr. David Jockers.

And in today's interview, I'm really going to be talking to women who are going through menopause, maybe peri-menopause (this period of time before menopause). Or perhaps you're younger, and you've heard horror stories about menopause. And you want to be prepared. We're going to be speaking directly to you. And perhaps you're a man out there. And maybe you're married to a woman going through menopause.

This is going to be extremely beneficial for you, just how to understand what menopause is. We're going to talk about basically what happens with our female hormones during this period of time of life and lifestyle strategies that can help ease symptoms and help improve this life transition as you get older and have this change-up in your hormones.

Of course, we're going to cover how fasting can play a role in that and the best strategies when it comes to fasting. So because this topic was so important, I reached out to my good friend and literally world expert in this topic, Dr. Marcelle Pick. And Dr. Marcelle co-founded the world renowned Women to Women Clinic in 1983 with the vision of not only treating illness but also help support her patients in proactively making healthier choices to prevent disease. She has successfully treated thousands of individuals through her unique approach to wellness.

And then in 2001, Marcelle created MarcellePick.com which is a great website that you can go check out. And her goal was to be able to reach, inspire, and educate even more women worldwide. Her website offers informative articles on women's health issues and at-home solutions to some of the most troublesome symptoms they experience today.

Marcelle also discovered functional medicine very early. She was an early adopter in this functional medicine movement and was honored to be one of the first to be certified as a functional medicine practitioner.

She's written a bunch of books including *The Core Balance Diet*, *Is It Me or My Adrenals?*, and *Is It Me or My Hormones?*. Great titles, by the way. And so these books have been read by millions of people around the world and made an incredible impact on helping women take back control of their health.

So Dr. Marcelle, thanks so much for joining us here on the Fasting Transformation Summit.

Marcelle Pick: Thanks for having me. I feel like I have a lot of information to share. And I can't wait to get started.

Dr. Jockers: Yeah, absolutely. I'm really excited. We talked. And I wasn't sure what your experience with fasting was. And you let me know how this is something that you practice and something that you recommend. And so I was really excited to bring you on this summit so we can dive deeply into menopause and obviously talk about fasting and how that can impact it.

So let's start with your story, though, at first and how you really got into the natural health movement.

Marcelle: Sure. So you probably don't even know this. I was born in Australia. I grew up in the Outback. And I spent a lot of my time with the Aborigines and the Aboriginal caves. So from a very early age, I was surrounded by natural and natural medicine.

And then I came to America when I was 11 after having been exposed to no cars. We didn't have a toilet. I didn't flush a toilet until I was 11. So my experience was really different when we came to America. And my parents are both Holocaust survivors. They were from Europe. So we never did a lot of the conventional ways of eating to begin with.

And from a young time, I knew that I was very interested in going into alternative medicine. I went to a program with Harvard Medical School (I'm a nurse practitioner actually) and Boston College because I knew then I needed to have this standard, how to do research, look at double blind, placebo control studies, and also understand where does the

notion of nutrient come into play.

And we started Women to Women in 1985 before anybody was doing any alternative medicine. We were the first all-women practice in the state of Maine. No one had done functional medicine or anything like it in the state of Maine. And we were equal partners—MDs and nurse practitioners.

So I've been on this trail for a long time, understanding that if we educate women in particular about their biochemistry and their health and start to understand what's upstream, we can help people be healthy no matter what their age.

And our medical system now says many times, "Here's the drug. It'll get you better." Well, it doesn't get you better. It takes the symptoms away and oftentimes makes worse symptoms on the other side.

So I'm passionate about this. I love what I do. And my goal is to change as many women's lives as I can with information, data, and also the support of things like intermittent fasting.

Dr. Jockers: Yeah, and you're definitely making a huge impact with your books, your website, and everything that you're doing. So let's talk about menopause. What is menopause? What's happening with the female hormones during that stage? What kind of symptoms do many women experience as they go through menopause?

Marcelle: It's interesting, David. Many years ago, if you'd come to me as a patient, the symptoms would've been hot flashes, night sweats, gaining some weight. What I see now more than ever before is anxiety, palpitations, abnormal weight gain, and absolute frustration with their body. Many times, they'll come in and say, "My body is deceiving me. What the h*** happened? I feel like a train wreck. I'm depressed. I can't sleep. I've got hot flashes. I don't have a sex drive anymore. I feel like I'm all dried up. What the h*** has happened?"

And if we go back for so many women, adrenals pay a huge part in the functionality of what's going on with our hormones. I think a lot of people don't understand that. And if we just look at basic biochemistry, cholesterol is one of the most important hormones to help our sex hormones—estrogen, progesterone, testosterone, and DHEA.

But if we have too much stress for too long, it makes cortisol because we can't live without it. So our hormones become very dysregulated. And when we have adrenal issues—which is too much stress—we women tend to multitask. We're great at it. But at some point, that rubber band breaks because we can't do it. Our hormones suffer greatly. And our thyroid suffers from adrenal dysfunction. We have autoimmune

disorders. We have immune issues, digestive issues. It goes on and on. So as we correct the adrenals, the hormones because more balanced.

And menopause is a journey of self-discovery. It's a psychological journey as well for women. Who am I? What am I going to do with the second half of my life? And how do I get there? So we have that on top of all the hormonal dysregulation and the adrenal issues.

And then we have symptoms galore that people are told are just part of the deal. And I'm here to tell you it is absolutely not true. We do not have to feel that way. But sometimes, everybody is a little different. We have to regulate things in a different way. And it depends on what's going on for that person. And diet is gigantic in this equation.

Dr. Jockers: Yeah, absolutely. And what kind of mistakes are people making when it comes to their diet and their lifestyle that may be setting them up for problems when it comes to the transition into menopause?

Marcelle: So what a lot of people don't understand is we have three of the major hormones that actually regulate hormones as well. And that's insulin, which comes very much from the food that we're eating. So if we have a very high carb diet, high sugar, that's going to cause very significant dysregulation with the hormones. Then we have adrenaline and cortisol.

So those are three major hormones. Two are related to stress. And the third is related to the food that we're eating. So as we make those adjustments and changes, just changing our diet will also help greatly with hormone regulation. And a lot of people don't understand that because it's very hard to find in the literature.

I've had a practice for 33 years. And consistently, changing the diet, getting the carb load down, having breakfast, snack, and lunch, and then many times I'll do intermittent fasting and not have anything after 8 o'clock the night before until lunchtime and perhaps some MCT in the coffee, that really helps stabilize insulin that then helps stabilize the hormone levels.

So just changing your diet, believe it or not, can help with some of the symptoms of menopause and also then addressing adrenal dysfunction, too.

Dr. Jockers: Yeah, because when you consume carbs or anything really that spikes insulin, an insulin spike is also going to cause an estrogen spike. Of course, with women as they go through menopause, they have lower levels of estrogen but also lower levels of progesterone. If they have this imbalance where estrogen goes up from an insulin spike, then that can cause a lot of these symptoms. Is that correct?

Marcelle: That is true. And what's the misnomer oftentimes is if people have a lot of body fat, their estrogen levels are actually higher. And remember, we talked about the cholesterol, the cortisol. What happens is there's an enzyme that gets blocked. It's actually called 17,20-lyase. And when that gets blocked, it prevents progesterone, estrogen, testosterone, and DHEA.

The biggest issue it causes is progesterone. So we have that discrepancy between estrogen and progesterone. And that's when people are what they call estrogen dominant. And we see that very often. By changing the diet and calming the adrenal system and then by cutting back on carbohydrates, it makes a significant difference.

And I've been doing this for 33 years. I cut back on carbs for many, many people for a long time. And then when you add the intermittent fasting in there, it really stabilizes things in a magnificent way.

And many people have hot flashes because of the up and down curve of the hormones. It's not that their estrogen is low. It's spiking and then going down and spiking and going down. So dietary changes as well as dealing with the adrenals very much helps stabilize.

And for some women, what I say to them is, "Look. On the other side of menopause, it's awesome because your hormones are pretty steady. You don't have the ups and downs anymore. You're not craving sweets. You don't have to go to sleep. You're not tired. It's stable. How nice is that!"

Dr. Jockers: And really, that menopausal transition is a stressor on the body because the body has to readapt to this lower level of hormone. And so obviously that's a stressor. And then you've got all the other things in life that are causing stress. And that's where women can be overwhelmed.

And so I know you've been touching a lot on adrenals. So what are things that women can do to help support their adrenals? We talk a little bit about diet. Maybe go into more detail on that as well as just lifestyle things people can do to support their adrenals through this stage.

Marcelle: Absolutely. So even just taking a little time out. Many times women are multitasking so much they have not time for themselves. Adding some nutrients—cordyceps, rhodiola, ashwagandha, astragalus—that can be very helpful for the adrenals as well.

But also saying no. For many women, it's that, "How do I learn to say, 'No, I don't have to do this today. I can wait till tomorrow.'" And understanding perhaps our perfectionism. All of those places are so important for women as well.

And then taking time to prepare their food. It's something that they take care of everybody. They take care of the kids, their partner, their friends, their business, blah, blah, blah. So it's taking time to prepare food. Oftentimes, I'll suggest women cook for themselves on Sundays and make a couple of extra meals. When they're cooking, make several suppers so that they've got things in the freezer if they're really busy so that food becomes the most powerful thing. It's the most powerful drug we have. So if we're conscious of what we're eating, it can transform our health in a week. It doesn't take long at all.

So adrenals are hugely important. But within that is also diet and also being mindful, doing from emotional freedom techniques, some tapping, two minutes of meditation twice a day. You're connecting up with spirit. Being outside. Putting your feet on the ground. Making sure you have daylight. Having a plant in your office. Breathing. 7-7-7 breathing. Inhale for 7, hold for 7, out for 7. Twice a day. Having a little thing on your phone.

But it's remembering to do this. And I also suggest that people take electronic Sabbaths, that they have sabbaticals from their electronics. They can turn them off at 5 o'clock several days a week. Or they don't even put them on a couple times a week because we become so addicted to emails and texts and computers and TV and the news, all of which can cause disruption biochemically in the body.

Dr. Jockers: Yeah, absolutely. Those are great tips. Now, how about sleep? Because obviously sleep plays such a critical role in our body's ability to adapt and recover from stress. But a lot of women, especially as they're going through menopause, have hot flashes at night while they're trying to sleep. And it really impacts their ability to sleep well. So what kind of suggestions do you have there?

Marcelle: Sleep is incredibly important. And I teach for the Institute of Functional Medicine. I'm always asking the audience, "How many people in the audience are sleeping 8 hours?" And no hands go up. "How about 7? How about 6? How about 5?" So many people are sleep deprived. And a lot of times when you have high cortisol levels at night, if we had something like phosphatidylserine or something like that, it can very much normalize cortisol so you can sleep again. And of course, addressing the hot flashes makes a big difference as well. But that's hugely important.

And getting good quality sleep, there's nothing like it, David. Seriously. You have to get sleep and also eat well. So those are two huge things that you have to do anyway. So why not do more of it?

Dr. Jockers: Yeah, for sure. And we know blood sugar plays a huge role. So all the things you've been talking about are going to play a really big

role in your ability to sleep well. I also find that a lot of people are eating dinner late at night which can certainly impact their body's ability to get a good, deep sleep and throw off blood sugar and just get the quality deep sleep that they need, too. So I think that can be a big factor.

Marcelle: Hands down. And a lot of times, people are eating the wrong foods at night. They're having desserts. Or they're having their wine or whatever. All of which is fine. That's not that we don't want to do that periodically. But most of the time, what I suggest is that you be much more mindful of the [inaudible], especially at supper time because our bodies digest that as we're sleeping. And then you're not going to get that quality sleep that you need to have at night.

And also make sure that your mind is clear, that you're able to be in a peaceful place to sleep. If you're a perfectionist, find ways. Sometimes for some of my patients, I'll have them have a pad by their bedside and a pen. And if they wake up in the middle of the night, they write it down. And they have some kind of twilight, not a bright light, so that they then can go back to sleep instead of worrying all the time or thinking all the time when they wake up.

Dr. Jockers: Yeah, that's a great idea. Absolutely. Let's talk about fasting. I know you've mentioned fasting and how that can play a role. So let's talk about how it impacts our hormones.

Marcelle: So we know that when you're eating, we've got the spikes of the insulin level as we talked about. And also then, you put those two together with stress. So the more sugar you're having, the more food that your body is trying to digest, it's going to greatly impact our hormones because the three major hormones, as I mentioned, as adrenaline, cortisol, and insulin.

So as you then become much more aware of not having food, so that you have episodes of time that you don't have food in your system, the body is able to actually stabilize things hormonally as well. And it makes a gigantic difference. For those people who have blood sugar issues, many times they'll ask me, "What will it do to my blood sugar? I can't possibly be without food." And the reality is most people, when they start cutting back on carbohydrates and they start seeing for themselves what their biochemistry does, they can easily do it. And they actually feel better. So it has a gigantic impact physiologically on many different ways.

Now the reality is we're all different. So there are some people who can do the 8- hour, the 6-hour fast. No everyone can do it. But most people, when I ask them to stop and not have breakfast, they're able to do that. And they'll increase the length of time. So they might have breakfast at 10. Then it might be 11. Then it might be 12. They might have coffee

that they still enjoy and have the MCT oil in it. That also stabilizes blood sugars as well and increases metabolic function.

Dr. Jockers: Yeah, I think that's great. A big analogy that I'll use with people is I tell them fasting is kind of like exercise. So if you're sedentary, if you're not exercising/training your body and you were to go out and in a sense go and try to lift weights with a personal trainer, you are going to suffer. You're going to be in pain. You're not going to feel good. If you were to basically think about just exercise as a whole based on that one experience, you would never want to train again. You'd be like, "This is the most painful thing in the world."

However, we know. We're conditioned in our society to understand that our body gets stronger through stress when it comes to exercise. You've got to train, adapt, recover, and then train again. And so if we do that over several weeks, we experience the benefits there.

It's really the same thing with fasting. It may be very uncomfortable in the beginning. And you don't want to overdo it just like you wouldn't want to overdo it in the gym. You want to take small steps. But you're going to get better at it. Your body is going to get stronger. You're going to develop that fasting muscle. And in a few weeks, you're going to notice, "Hey. It's really not that hard. I can go 14, 16 hours between my dinner and my first meal. It's really not that bad. I actually feel better when I do it on a regular basis."

So if we go in with that mentality, we're going to have a lot better experience. Our experience is going to match our expectations. And we'll be able to develop the fasting muscle appropriately.

So how do you like to start with fasting? So when you start bringing that up, what's your initial goal? Is it 12 hours between your last meal and your first meal? Fourteen? Where do you like to start?

Marcelle: Well, David, it depends on who they are. My patients are very different in terms of, "Marcelle, I can't possibly. I always have dinner at 9."

And then I say, "Well, let's try having your lunch maybe at 11 and see if we can change the number of hours." And I also tell them, because the research is pretty compelling. If we look at mice studies in particular, in terms of aging, we know that fewer calories and the fasting play a gigantic role, again, with what we know for people to actually have longer lives.

So I start with the education about that because so many women come in saying, "How do I live well into my—whatever—70s, 80s, 90s, 100s?" And then I have a buy in from them.

And then we start talking about, “Okay. Can we have our dinner perhaps back to 8 o’clock or 7 o’clock or 6 o’clock? And then let’s see just drinking more water or having a cup of tea. And then in the morning, maybe we can have lunch at 10 and then 11, then 12.”

So they find that it becomes easy for them. And then I have those patients who say, “Look. I’ll just do what you tell me. Just tell me where I start.”

Okay. Let’s have dinner at 6 or 7, and let’s not have lunch until noon the next day. And oftentimes, they come back saying, “I feel great. I’m going to start doing it Monday/Wednesday/Friday.” And that sounds great to me.

Dr. Jockers: Yeah, I think that’s great. So you’re personalizing it, individualizing it for the individual which is really what functional medicine is all about, figuring out where people need to start.

I know for me, I always try to say—and I call it the simple fast because I really think it is simple. And it’s just really a mindset more than anything where you take 12 hours between your last meal and your first meal. So if you finish dinner at 6 o’clock, you wouldn’t eat until 6 o’clock in the morning the next day. And I think it’s very doable. If the individual eats dinner late and they finish at 8 o’clock, 8 a.m.

And then you start your day. And your goal is to drink 16 ounces of good, filtered water, maybe herbal tea if you wanted that, before you ever think about any sort of food.

And if you say, “Okay, I’m going to drink 16 ounces of water before I think about food,” oftentimes, it’s going to take you an hour or two at least to drink that 16 ounces. And you also suppress your hunger hormone ghrelin by just basically putting something in your stomach which makes you feel less hungry. The water helps with energy production. And if you’re feeling just a little bit down, you can also add a little bit salt, just a little pinch of salt. And you should immediately notice an improvement in your energy levels.

And so I find that when women start to do this, take on this mentality and this practice, they realize, “Hey, it’s really not that hard. I can actually do 12 hours easily actually. I think I can mature up to maybe 14 hours. And then possibly even up to 16 and 18 hours.” And now we’re off to the intermittent fasting lifestyle.

And so what are some of the most common mistakes, though, that you see women making when it comes to intermittent fasting?

Marcelle: I think a lot of times people get scared. And so they’re going

to have this big meal at night. And they have more carbs. And they might have more sugar. And it's like, "Wait a minute. Wait a minute. No, that's not what we're doing here. We need to cut back on that because then they go really hungry in the morning.

So if they are more mindful of the last meal—and I always say to them, "Look at a plate and think of half of it being lots of colorful, colorful vegetables, a quarter of it being protein, and a quarter of it being fats and carbohydrates. It's going to be much better for you."

I have a weight loss program. And I use a homeopathic remedy for them. And most of them don't have breakfast at all anymore on the other side of this. So they have their meal at 6 or 7. And they don't eat anything until lunchtime very, very comfortably. So they've adjusted to this new lifestyle. Blood sugars are staying stable. And they feel fantastic.

So everybody is a little bit different though. Some people really want to have breakfast, in which case, then that's a 12-hour, 14-hour fast. And the last meal of that day before is going to be really important because the more processed foods we use, the more sugar that we have in our diet, the more we're going to be starving. And we're not going to be able to follow through.

So it's really changing eating habits, being mindful of no processed. If it can stay on the counter for four days, it's probably not something you want to have in your body anyway.

Dr. Jockers: Yeah, that's great. Another big mistake that I'll see is a woman will be like, "Okay, I'm going to finish my dinner at 7 o'clock. And I'm not going to eat after that." But then they end up working late at night or watching TV late. And all of a sudden, it's 11 or 12. And they get this extra cortisol spike which is going to impact their blood sugar. And now they have the munchies. And they're like, "I've got to eat something. I can't go to sleep like this. I've got to eat something." So that's another common mistake that I'll see.

So really dialing in your sleep habits is huge. And usually, if you are doing stimulating activities after 9, 9:30 at night, you're going to get a big jump in your cortisol because your body has to readapt. Normally, cortisol is going down. Your body is like, "Uh-oh. For whatever reason, I need more cortisol because I need to survive. I need to produce energy here." And it bumps it up.

So my goal is, if I'm working late, I have to be off my computer by 9. Not having electronics around. You talked about having a timer, turning off electronics. I think it's just so powerful. And so many women, because it feels good—we work hard all day. And we want entertainment. So we want to watch Netflix or look at our social media and look at what everybody in our life is doing. And that, again, can be stimulating and

keep us up and obviously impact menopausal hormones. Are you seeing that, too?

Marcelle: Oh my God! Absolutely! And I think the biggest thing I see, because I see only women in my practice, is that it's hard to know that all this makes a difference. And I think a lot of people are unaware that if you're on your computer and you're watching the news and you're looking up Florence and, oh my God! all these things. All of those things increase your cortisol in addition to that. [Inaudible] changes your appetite which increases your frustration about, "Oh my God! Look at all this devastation. What am I going to do?" So it's being aware of what your limits are. And also, where are the places that you can absolutely stop?

For some people, believe it or not, I say to them, "Don't watch the news. If you can't go and do volunteer work and that's really in your heart, then don't watch it at this point. Have other avenues for yourself. Or turn your computer off by 9 o'clock or 7 o'clock or 5 o'clock. Or turn off your cellphone as long as all your kids are fine and no one needs to get ahold of you." Whatever it is that's stimulating you is going to be an important part because the goal of this is success. So we want our patients to be really healthier and happier and have great success and not to feel, "I tried it, and it didn't work."

And again, for me, it's a really individual approach to, how much time can we do? How long do you think you can fast? And how do we begin to change your diet so the food is all natural? It's made by you. It's not processed. And how do you learn about the foods that are most important from the Environmental Working Group to have organically? Let's start there.

And then incorporate fasting in because it does make a huge difference with aging. There's no question about it. We know that. And we have known that scientifically for a long time. And fasting is a part of it.

Dr. Jockers: Yeah, for sure. So you've been talking about food. What are your top five foods that women going through menopause should have in their diet as long as, again, they don't have an immune sensitivity to these foods? It should be personalized. But let's just say they don't. What are the top five foods that you would say that they should definitely be consuming?

Marcelle: So vegetables is a big category. The more color the better. I would also do protein sources. It gets a little harder for some people who want to be vegetarian. But it's still possible to do that as well. And then also, if you're going to be doing things like sweet potato or some of the yellower foods—and I always talk about the rainbow of colors on a plate. I always divide my plate for people so they know what to

be having. And I'm not a big fan of lots of pastas and things like that because I think it really does people in. And many of my patients don't have a stop gap. They have a big bowl of pasta. And that doesn't do really well.

Fruits and vegetables. And the fruits, from my perspective, would be lower in terms of the glycemic load. So it would be berries. It would be raspberries, blueberries, strawberries. Grapes are pretty high in sugar. So I try to stay away from them. But again, everybody is different. What makes you happy? I do genetic testing on my patients for the weight loss program. In there, I can see. What are the people who have something called disinhibition? No matter what I tell them, they're going to do something different. Or a food desire. They're going to go across town to get that food. I know that. So I'm going to include that in their food plan as well.

Dr. Jockers: That's good. That's good. Absolutely. So you know some inside information on people through their genetics.

Marcelle: Well, then I tell them too of course.

Dr. Jockers: Exactly. Now, how about supplements? What are some top supplements that can help a woman as she goes through this menopausal transition?

Marcelle: Sure. The things that are probably most helpful for many people are black cohosh, dong quai, any of the yams are really helpful as well. In particular, I use over-the-counter progesterone cream for women. But I'm also testing hormones. So I know what level I need to put them on. A fantastic multivitamin with 5-methyltetrahydrofolate in it. So you're looking for 5-methylfolate in it. And then also fish oil is really important.

Many of my patients I'll put on N-acetyl cysteine so that I can help with estrogen metabolism because it's not so much an estrogen issue, especially when we look at breast cancer. It's more how that person metabolizes their estrogen. And I also will use a lot of either DIM or indole-3-carbinol which are from the broccoli family, the brasicas... Anyway, you know what I mean.

Dr. Jockers: Brassica, yeah.

Marcelle: Thank you. So also you can't get enough cauliflower or broccoli in there. We need to be eating about a pound a day. So it's much better to do a supplement. So everyone that's in menopause in my practice, I put on either indole-3-carbinol or DIM.

Dr. Jockers: Yeah. Yeah, really good stuff.

Marcelle: And that lays the foundation. And obviously, people have different products that work. Maca is also a good one for some people too. But what you're trying to do is you're trying to stabilize the hormones as much as you can, also help the liver support detoxification.

Dr. Jockers: Yeah, absolutely. That's key. You've got to get that liver really working and metabolizing all those estrogenic chemicals that are coming in from our society, that our being produced by ourselves. We've got to be able to metabolize those.

Now, I see also some nutrient deficiencies like zinc and magnesium being really big with this.

Marcelle: Hands down. I test all my patients for this. I always look at red blood cell, magnesium. I do zinc levels. And I do B12 levels. And I also test most of my patients for MTHFR so if they have a [inaudible] deficiency. So I'm very specific with them in my practice. And that's always good because magnesium is one of the most diluted supplements because of all the stress that we have in our lives.

Dr. Jockers: Yeah, for sure. And for you, when you're looking at the labs, what's the ideal zone that you like to see magnesium, B12? What do you look at as far as zinc? Are you looking at alkaline phosphatase? What are you looking at there?

Marcelle: I'm looking at alk phosphatase. I'm looking at liver enzymes. I'm looking at the whole profile. One of the things my patients always ask me about is, "Well, my labs are within normal range for another doc."

It's like, "No, no, no. I want to see the numbers because I expect the range to be actually mid of the range, not either high or on the upper low." A TSH, for example, for me is going to be 2 or lower, whereas other labs are going to say 3 or 4. And that's going to tell me about optimal health. And if we look at zinc, so many people are zinc deficient, also iodine deficient because many people are using healthy salts now, which is good. But they're not getting then the additional iodine which affects the thyroid. And, mind you, it also increases their risk of fibrocystic breast changes. As you add iodine or even Lugol's solution to the breast, the fibrocystic changes go away.

So as many things as you and I both know make such a big difference when we start paying attention in a different way, including the diet, the fish oil, the vitamin D. All my patients are vitamin D deficient. I like to see my patients around 80 to have a normal range of a vitamin D level. And I use also liposomal magnesium which makes a big difference as well because it gets absorbed much better. It also helps with restless legs and other things like that that you can't get that effect when you add magnesium in supplement form.

Dr. Jockers: Yeah. Well, this has just been such a great interview. So much great information. I know that women out there that are going through menopause, I'm sure they're really thankful for this interview. And you've just provided so much high quality information. And so what are some final words of inspiration that you have for our audience? And where can people find out more about you, too, Dr. Marcelle?

Marcelle: So they can go to MarcellePick.com. All my information is there as well as access to Women To Women Healthcare Center which is my clinic here in Maine.

I guess the thing I want to say to women is that no matter where you are on the spectrum of health and how you feel, there's always a way for us to get you to the other side of it. And disease doesn't come overnight. It's been a progression. And we just sometimes need to find out the cause of the cause to figure out what we need to do to get you feeling the absolute best that you can. And it is possible.

Dr. Jockers: Awesome! Well, thanks again, Dr. Marcelle. I just want to recognize the impact you've had on natural health. Really, you've been doing this for so long and have pioneered the course for younger people like me to come up and get this information out. So thank you again for joining us.

And for those of you who are out there listening, I just want to remind of this and really give you hope that fasting has the ability to unlock this dormant healing potential within you. The power to heal is within you. You may be suffering. You may be struggling with your health. But the healing power lives within. And fasting can unlock the dormant potential there. And it's safe. It's powerful. And it just might transform your life.

You learned a lot in today's interview. So I really hope that it encouraged you, inspired you to get started even with something as simple as what I talked about, the simple fast, and starting to implement that.

And if you're getting a lot of value out of these interviews, I also want to encourage you to consider owning the entire Fasting Transformation Summit for yourself. That way you can resource all these interviews, all the bonuses, the transcripts, everything that we're offering at any time for the rest of your life. And I've found that during a fast or as you're getting going with a fast, listening to interviews like this can be so helpful and encouraging and just lift your spirit, break through limiting beliefs that you might have, and help empower you to take back control of your health.

So if you'd consider owning it and having that for yourself, I know it'll provide value to you. And we would be really, really honored and blessed. And so we'll see you on a future interview. Be blessed, everybody!

Transformative Fasting from a Female Bodybuilder

Guest: Dr. Rosie Main

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: fasting. I'm your host, Dr. David Jockers.

And today, I'm going to talk to a good friend of mine who happens to be an incredible doctor and an athlete who has used fasting to help her overcome chronic health conditions and to be able to perform at her optimal as an athlete and as a doctor. And so the title of this is "Transformative Fasting from a Female Bodybuilder."

My friend is Dr. Rosie Main. And Dr. Rosie has a passion and vision to educate her community on a new level of thinking towards health and inspire people to start making healthy lifestyle choices and has done so for almost 20 years.

She currently sees patients in her clinic Main Health Solutions in Meridian, Idaho, helping families live to their full potential. She is the team chiropractor for USA Wrestling and has been traveling internationally with the team since 2009 to help them achieve peak performance and was USA Wrestling team doctor at the 2012 London Olympics and was the team chiropractor for USA Wrestling in the 2016 Olympics in Rio de Janeiro, Brazil.

She also helps people with her weekly radio show and podcast that she does in both English and Spanish and inspires people in health transforming information all around the world. She is a co-author of

Christian Living Magazine and a chiropractor for Ballet Idaho.

And the most notable characteristic—this is really what I know Dr. Rosie for—is just this incredible heart and passion for helping people. She happens to be a mother of twin boys. I have twin boys. So we have that in common as well. And she just has a heart to see families live to their God-given potential through natural healthcare.

So Dr. Rosie, thanks so much for joining us with the Fasting Transformation Summit.

Dr. Rosie Main: I am so happy to be here, David. I actually have just had a passion for this topic. And so when you invited me, it was one of those things that has been on my heart. And I've been actively doing this for over a year now. And sometimes these moments are just right for the right time.

Dr. Jockers: Yeah, absolutely. I think we were talking about it back when we met up in Utah. I believe we had a conversation about it. Or you posted something on social media. I can't remember. But I was like, "You know what? Rosie would be such a good guest for this summit."

And I remember we talked a little bit a while back about really what you struggled with Crohn's years ago and discovered fasting through that. And I'd love for you to share that with our audience.

Dr. Main: Yeah, so that's actually one of the biggest things that brought me to what I do now with natural health through chiropractic. I was a bodybuilder back in 2000 and going to school. My competing time was at its peak at that time. And then about six months into a show I was preparing for, I began to lose extreme weight. Lost about 20 pounds to 30 pounds in about two or three weeks. And I couldn't understand what was going on other than just I was going to the bathroom continuously.

And so stress at the time, I think, you top off the emotional stuff, the physical. I was going to begin medical school. So long story short, I got to the point where I went to the hospital. They found a segment of my colon that was completely raw. They wanted to do surgery. My doctors were telling me that was the only option.

And luckily, my dad went to come pick me up from San Antonio, took me back home, South Texas. He was going to take me to a doctor there in Mexico. And my cousin came to talk to me. She says, "Why don't you go talk to my chiropractor I work for?" And I had no idea that chiropractic had anything to do with health other than back pain.

And so fortunately, once talking to him and after spending the summer there, things changed for me that I ended up going to chiropractic

school which leads me to what I do today. So I'm very thankful for the circumstances that sometimes we have to go through. But because of that, that started my journey through health. And I do a lot of, still, things to help heal my gut with even fasting, bone broth fasting, those kind of things for my gut.

But David, recently my struggle personally with my story has been my insulin and glucose sensitivities. My mom actually lost her health through diabetes. My sister, last year at 47, also died from diabetes. So I have always had to struggle watching my family with issues with health. And again, the circumstances that you walk through are for a purpose. And I have no doubt whatsoever that this has happened to me.

I've been really sensitive to glucose and more so through stress. Just this July, my dad had a heart attack, a stroke. And he's been struggling with his health. But because of that last year with my sister dying, my insulin resistance was huge. My levels and my sugar were up to about 300, 350.

Dr. Jockers: Wow.

Dr. Main: Yeah, so it was an eye opener. Stress, as far as I'm concerned, was what did it. I eat right. Basically, I stick to a very good ketogenic type of eating. But the stress, the cortisol just raised up those sugar levels. So I had to do something. And again, through prayer verses, I started to seek answers. And all I could read everywhere in the Bible was back to going to fasting.

And I really didn't know much more than the bone broth fast that I would else. What else? So I started really researching into fasting. And that's what brought me. This last January 2018 I started tapping into doing lots of different types of fasting. And it's been beautiful to watch how the transformation has occurred, not only with my health and my sugars but also even with my lean body tissue.

Maybe because I'm getting older or whatever, but I couldn't get that lean body tissue where I wanted it. And my fat percentage was over 30%, almost to 40%. I didn't understand what was going on. But I definitely have brought it down closer to 20% now. And now as I compete, I want to bring it down into the teens again. So yeah, it's been amazing to see things change!

Dr. Jockers: Yeah, absolutely. That is remarkable. And you're so right. That stress plays a huge role with our overall health and definitely will drive up blood sugar. And so you were seeing obviously detrimental effects from that. And so through prayer you found fasting. And you started obviously implementing that.

Now, when did you decide to compete again? Because I know that you

were a bodybuilder. First off, let's talk about your bodybuilding career, when you started, and what sort of nutritional habits you were taking on back when you first started bodybuilding and how that has transformed over the years.

Dr. Main: Yeah, totally has transformed my mindset, of course. You shift as you grow. And you learn things. I started actually power lifting. That was in college in undergrad. And I was very competitive with power lifting. I was very good at lifting a lot of weight up to even 410-pound squatting.

Dr. Jockers: Wow!

Dr. Main: Yeah, so it was really a whole different type of mindset back then. It was just eat and sleep, eat and sleep. And you'd eat and sleep all day long and just get big. And it got to the point where I got too stocky. So I started to find other ways of keeping the sport. And so I started bodybuilding. And I had a friend of mine start training me. But the whole concept of eating back then with bodybuilding was eating every two hours. And so to keep up with that regimen of eating two hours and preparing.

But the meals back in the day of bodybuilding back in the 1990s—and that's when I was doing it really heavily and then in the early 2000s—it was just eating whatever. It wasn't about eating good food. It was just getting the good meal in there with good macros. But it was all just whatever was there—protein bars, energy drinks, protein drinks that were very acidic. And that's what I know that also was a tipping point for me with my Crohn's. It was a totally inflammatory diet. And it was just lots of pasta, lots of rice, lots of just whatever type of fat. It wasn't really about the quality of the food.

And when I met up with that chiropractor, he totally changed my mindset on inflammatory foods. And that's when I started to learn more about that and healing the gut. And that's when I started to implement some of the changes of getting rid of the refined foods, going back to real foods.

And so then that's when I started competing more as a figure competitor. So bodybuilding is more of—now, they call it physique. But basically, bodybuilding now for women has become physique. But then I started to tap into figure competitions. And so in the 2000s, I competed figure competitions. Won a lot of events again, but doing it with real food. And so got rid of all the toxic food. That did amazing stuff for my health and also my performances, just winning one after another. It was beautiful.

Then I got pregnant. And my mindset was more into making sure I was

there for my kids. So I put bodybuilding and figure aside. And I think I competed once or twice after I had the boys. But then I decided my efforts are going to go to my kids.

But now doing it again, I want to do it in a whole different mindset, again doing it healthy, even better than ever, trying to implement now the fasting and being able to prove that you can do this while you're fasting, while you're still maintaining a healthy lifestyle.

Dr. Jockers: Yeah, and I definitely want to come back to that. But first off, I want all the viewers to know that, number one, being an entrepreneur is not for the weak at heart to begin. Being a bodybuilder is obviously a very, very tough sport. And then being a mom of twins—I'm a father of twins. I see what my wife goes through. I know that that is definitely not for the faint of heart, very, very challenging. So obviously, you've been doing all three of these things. So it's okay that you took several years off to help raise your kids. That's for sure.

And so you were competing. This was back, what? 2005?

Dr. Main: 2000 to, 2012 was my last show. So I still have always kept up working out, doing CrossFit, just doing high intensity training in my garage now. And so I've kept up my muscle. But now, I want to really lean into going back to either just figure or even physique if I can get enough muscle on my body.

Dr. Jockers: Yeah. Yeah, for sure. And so I have a similar past. I wasn't a bodybuilder. But I was a personal trainer. And I thought the only way I could maintain my weight—at that point, I think I was about 170 pounds—was I had to eat literally eight meals a day from the time I woke up in the morning to a protein shake before I went to bed. And that was a major contributor in me delivering irritable bowel syndrome. And then I dropped 30 pounds. I had extreme adrenal fatigue. I would go from sitting to standing where I'd be dizzy with orthostatic hypertension.

And I noticed that when I actually stopped eating, fasting actually in the morning, I had less gut pain, fewer gut symptoms. And I actually started gaining weight. So I was doing intermittent fasting. I didn't even know the term. I would just really hydrate well in the mornings. I just felt better eating in the afternoons and evening. And of course, cleaning up my diet, and that was a key player in me healing. And that was how I discovered the power of fasting.

So I have a really similar story as far as that goes. And so I find that really, really interesting. We have a lot of parallels there with twins, gut issues.

Dr. Main: Isn't that weird?

Dr. Jockers: I know, right? And I've got diabetes in my family as well. And my blood sugar when I developed skin cancer later when I was 28, that was a huge factor. I had high stress and high blood sugar. And I was eating a healthier diet than just about everybody I knew. But these were big factors. And so fasting and ketosis really helped me heal both of those conditions.

And so let's talk about the mindset shift because I know when I shifted to eating—when I was healing from irritable bowel, I reduced my meals to two meals, one to two meals a day, which is still what I typically do. And that was a huge mindset shift for me. I thought, "There's no way. I'm going to lose weight."

And as I started, actually my muscle tissue got better. I actually was gaining weight. I felt stronger in the gym. I thought, "I can't believe this. How is this even possible?"

I was taking exercise science classes. And they all said, "Well, it doesn't work like that." But obviously, it does. And so what was your mindset shift as you've embraced fasting here?

Dr. Main: It was that time when I lost my sister, and I started to, again, pray. And I started to ask God to give me answers of what I needed to do. And just again, like I mentioned, fasting and prayer were the verses I was coming up to. And my mindset at that point was that I was not going to allow my kids to have to suffer just like my sister suffered, my mom suffered, or us even as my other sister and I have been caregivers. And so the mindset was the fact is there are people out there searching for answers. And I need to find out what has to happen in my life so I can go better help others.

And again, I knew at that time that it had to happen where it was an extreme paradigm shift. I started fasting spiritually, not really for the sake of physical, just spiritually. And I started to still check my sugars. And things were going down and down. So I was like, "Wow! This is something."

And so I felt clearer, too, of course. I know I was more connected to a higher source. But even just mentally, I was able to handle more. And that's when I started to research more into the physical component of fasting and started to really dive into what was going to happen if I did this while I was working out because at that point I wasn't working out. I would just rest and not do anything extreme. So I started tapping into that. And I started to see even better lifts and better trainings.

And so the mindset, I think, at that point was, "You know what? I'm going to use 2018 like a time of healing." And it was more for the sake of doing it, not only for me but being able to be there for my family. And that was

the biggest thing. After losing my sister, I'm like, "Who's next?" And after that was a light bulb moment, the epiphany that we need sometimes to wake up and do something about it.

Dr. Jockers: Yeah, the pain-to-purpose story. Absolutely. And so you took the spiritual approach. And you were saying, "I've had all these issues going on with my family. I want to just take time and just surrender myself to God and hear what he has to say to me." And fasting is one of the most powerful ways to do that.

What was your experience like when you first started fasting? Was it really, really uncomfortable for you? And did you just basically deal with that with just lots of prayer? What was your experience like as you first got started? And did it get easier over time?

Dr. Main: I think that the fact that I was already—and the term that we use in the ketogenic world is keto-adapted. I think that made it a lot easier, the fact that my body was already using fat for fuel. But what made it easier is that initially I started with just a one-day, two-day fast. And then gradually, I would increase the amount every month. I committed that, you know what? For this year, every beginning of the month, I'm going to do an extended fast, not an intermittent fast.

I had played with intermittent fasting. And that was already doing really good benefits for my body. But I think that the biggest change in my glucose and my healing with autophagy being a big concept that I learned at that point is the healing being when I did extended fasting.

And so I started with a two to three in January. I checked my levels, which were good. So for February I said I'm going to aim for five days. And I did the five days. Then in March, I just did a little bit more. And I think my longest fast, a water, extended fast, has been up to nine days. And it's one of those things that has really been hard to do, the extended fast.

But I think what made it easy for me initially is making sure that I had my comfort food. And I've dropped that comfort food which is coffee with creamer. So initially, I was still adding the coffee, like a Bulletproof coffee initially in the morning. So it's not a full fast because I was still adding the creamer in there. But now, getting to the point of having more herbal teas and getting rid of the creamer, having black coffee. It's still hard. But that's the way I've been making sure it gets done.

Dr. Jockers: Yeah, Well, I love the progression. So you started out—and this is really what we're teaching people here. Start out with intermittent fasting strategies. Really work on getting your body fat-adapted. And then start pushing it out slowly—a day, two days. Just like you did. Then you went to three. Then you went to five. Then you went to nine days.

You were using something like the Bulletproof coffee, so it's like a fat fast, which has great benefits. A lot of times, people find that they can be more compliant with it. And you still get incredible levels of autophagy. You stimulate stem cells. So you get tremendous benefits with this.

And you were just graduating yourself up each step along the way. So I think that that is powerful for the listeners to take away. It's not like you just jumped in full throttle, which you certainly could. However, it's a little bit more dangerous. And it can definitely be really uncomfortable. If you're just jump in, you're like, "Okay, I'm doing a five-day water fast right away." It may not be the best strategy. So you graduated up slowly. And you just basically said, "The beginning of every month, I'm going to do some sort of fast." And you were doing this with the right mindset, so taking a spiritual approach to this as a way of honoring God.

Dr. Main: Yeah, [inaudible] last year. I started the 16-hour and the 24-hour fasts. And so actually now these last two months, my commitment for November and December this year is to do also an intermittent fast. But I'm doing a 24 to 48. So right now, I'm actually fasting. I fasted Monday. And all the way until two o'clock today, I start my first meal. Then I'll eat today. Then I'll fast again Wednesday all the way till mid-Thursday. Then I'll then. And then Friday I fast again. And then Saturday I have my feast day where I'll eat all three meals and have diet variation which is what I've been implementing these last two months.

But last year November and December when I started praying about fasting, I was just doing a 16-hour fast, intermittent fasting. But I really feel that that's what actually allowed me to adapt to where in January of this year I began the extended fast. So definitely one of those things you've got to build up to and be committed because I think that's one thing, too. In the beginning of the year of 2018, I committed myself. And until you commit, you just say, "This is what I'm going to do."

And you do it for a bigger purpose. And like you said, "From pain to purpose." You have to have a bigger—it's not about just weight loss. It's about healing. It's about going back and not only changing the metabolic effects of fasting which are great. But I really think that the biggest intent was healing and healing not only physically but spiritually. And it's done wonders for both. And that's where I'm actually doing a seminar in January for my patients to do this for themselves as well. It has just worked so well for me. But it is a journey.

Dr. Jockers: Yeah, absolutely. And taking that mind-body-spirit approach I think is so powerful. And so the whole time you were working. You're still taking care of your kids. How old are your kids now?

Dr. Main: They're 10 now, yeah.

Dr. Jockers: So they're 10. So you're still taking care of your kids. And you're a chiropractor at a very high volume chiropractic office, very successful chiropractic office. And you're hustling. You're working. You're working out. You're doing all these types of things. And so did you see any decline in your performance? Or how did you deal with that?

Dr. Main: Initially, it was hard. Initially, my body still was trying to figure out what I was doing. And so I think that whenever I would have just those moments of weakness, again the beautiful thing is my husband participated with me. He actually did it with me and has done so. Even to this day, he's doing it, not because he truly has something to do it for. But he's just an awesome husband. And I can't brag enough about him.

But yeah, I think what makes fasting easier is when you're busy. When you're busy you don't have time to think of yourself for eating and actually makes it easier. Mondays, Wednesdays, and Fridays are my busiest days in my practice, making it very doable because I'll just have my tea, my water there. And I'll just be sipping that as I'm seeing patients. And it's harder when I'm home. Tuesdays and Thursdays I'll be here. The kids want something to eat. Cooking for them. So I'd be having to just sip on my tea. And that makes it a lot harder.

But again I try to tune in to my bigger purpose again. Every time, anchor to that. So I'll be listening to either fasting videos. Or I listen to Jason Fung a lot. Dr. Jason Fung is just amazing. And he's so awesome to listen to. So it's been wonderful to be able to just keep my mind focused on the purpose.

Dr. Jockers: Yeah. Yeah, for sure. I have the same experience. When I first started fasting, it was like I would do it on a weekend because I needed to rest. I knew my performance was going to go down. And this is one thing for the listeners to understand. As you develop your fasting muscle, fasting becomes a lot easier. And you can perform at a higher level. And it's easier to get things done. You have fewer distractions. The ketones are elevated in your brain, so you're sharper.

So for me now, my busiest days are when I'm fasting, just like you. And it's actually harder when I'm less busy because then I'm thinking, "Oh, this would be really nice to eat." So it's good to be able to create a schedule over time where maybe in the beginning when you first start, don't put too much stress on yourself while you're fasting. Then as you start to adapt to it, then you create more of your busyness around the fasting and more of your downtime around your eating periods. So I think that's a great tip right there.

And now, you're doing the alternate day fasting. And we actually have Dr. Jason Fung on the summit talking about alternate day fasting and the benefits of that. He's a big advocate of that strategy. And that's obviously

what you're doing now which I think is a really great strategy as well because when you're doing an extended water fast there is a process you've got to take to break that fast that can take several days. I always say for every two full days that you are doing a water, you've got one recovery day where you're just implementing more smoothies and liquid nutrition, maybe some fermented foods.

Whereas when you're alternate day fasting, you can eat normally when you're breaking that fast. You can get right back into your lifestyle. It's easier, I think, to incorporate into a busy schedule. And you get tremendous benefits. Lots of autophagy. Some people say you've got to fast longer for stem cells. But actually, you are starting to develop some stem cells. And by doing the repeated fasts like that, it can be very, very powerful stimulus over time to rebuild your entire cellular body.

So I think that's a great strategy. And I think it's very easy to incorporate. You also mentioned the diet variation, incorporating some feasting in there as well because certainly we don't want the body to just—we get a lot of benefits from being in a time of famine like the down regulation of inflammation, the ketones, the human growth hormone, all these amazing healing benefits. But if we're in famine too long, that thyroid shuts down. Metabolism shuts down. And in a sense, our body wants to go into hibernation. So you're using some feasting to help boost up the insulin, to help basically rebuild your glycogen stores, and to activate that thyroid hormone.

And how are you doing your training now with the alternate day fasting? You said you're training for a competition now.

Dr. Main: So I'm training a 4 to 1 regimen. I do four workouts Monday through Thursday. I'll rest Friday. Then four workouts. So it just cycles. So I haven't changed that. With this every other day fasting, I feast on Saturdays. So I know that I'm going to feast on Saturday. So Sunday has become my leg day because that's a very important, taxing day.

But on Saturday I'll allow myself more carbs. So I'll have my sweet potatoes. I've even gone to brown rice, whole grain rice and even whole grain grains like oatmeal. And so I'll even add those in there, shock the system a little bit. My bowel doesn't really like it with my issues with my gut. But it's worth it. My mind just knows I'm going to have that day of rest.

And so in my extended fasting, three to five days, I did it for November. And what was beautiful to watch and what I've seen is that my ketone levels are staying high even when I begin eating. And my ketones are still at 4 or 5. And so it's been beautiful to see that. And so it's just one of those things that I think my body is getting in this groove of liking what I'm doing.

But diet variation has also made it where my body is always guessing what I'm doing. And even my spirit doesn't feel like I'm taxed because I look for these little moments and treats. And when I do have treats, they're typically still ketogenic. I made a ketogenic cheesecake and just indulged in that and was okay with it. So yeah, just switching it up continuously.

Dr. Jockers: Yeah, absolutely. I think when you feel deprived it's a lot harder. When your mentality is saying, "I'm feeling deprived," it's a lot harder to carry this out and make this sustainable. So you've developed these strategies using the feasting days and having these treats. And basically, you've recreated a very good relationship with food. And I think that's one of the key benefits fasting can provide if you go into with the right mentality.

And so let's switch and talk a little bit about women's health because obviously here you are, female bodybuilder. In the fasting world, there is some controversy about females and fasting and, of course, about high level athletes like bodybuilders and fasting. And so basically if, let's say, one of your female competitors came to you. And obviously you also work with USA Wrestling as well. So what if one of them came to you and said, "You know what? I see that you're doing this. How would you recommend I get started with this sort of lifestyle, adding in fasting and changing my nutrition?" What would be some of the best ways to get started with this?

Dr. Main: Right. I think whether you're an athlete, you're a female, a male, I don't really feel there's a difference. We're all human beings. Yeah, you do have the need for good, quality fats. So I think that the fact is that as a female we want to actually promote more fat into our diets. And I think that's the biggest myth with women where we're so afraid of fats. And so with this lifestyle with fasting, it goes back to also the ketogenic lifestyle, adding more fats to your diet.

And then also with that, I think there's one week before my period—and I know that many women experience changes in estrogen and progesterone. And so that week before my period, I'll actually allow myself more carbs. Now, I really feel the body does the right thing at the right time and gives you these cravings for a reason. And so when I have that week before my period, I actually allow myself to have more of the carbs that my body is craving. And that actually allows my body to function better.

But I'll have them with more good quality fats and decreased protein. And so I've [tailored] things to fit for my needs as an athlete as well. As a woman athlete, I think I need to read my body and listen to my body.

The other myth for most women is your thyroid levels when you're

fasting. Is it going to affect that? I really feel, yeah, your thyroid, your metabolism goes down. Your precursors are what go down. There's been research showing that your thyroid itself, hormone levels don't change. It's the precursors. But then as soon as you start eating, it goes back up. And so I think that the myth of, "Because you're a female, you can't do it," is wrong. I've proven it to myself.

And as far as an athlete, I think that I wouldn't start athletes with extended block fasting, per se. I would just go and start teaching them the methods of intermittent fasting. Specifically my Olympic athletes that I work with are training twice a day. Their needs probably for more food and fuel are needed. I train once a day. As I get closer to my competition, I may shift what I'm doing. It just depends on the needs.

For a typical female, I really feel it's needed. So much fear goes back to, "I'm going to lose muscle." But your body doesn't tap into that until it gets rid of all the fat. And the reality, we have so many fat stores that we can tap into. And unless you're maybe less than 10% body fat, you don't have to worry about you losing the muscle. An extreme bodybuilder may lose some muscle. But a typical female, we carry a lot of fat.

Now, if you are pregnant, I would probably not advise fasting, of course. You would want to make sure you keep your fat levels up and you stick to a good, healthy diet that is filled with good nutrients all across the board.

Dr. Jockers: Yeah, absolutely. In total agreement with that. When you're pregnant, you definitely don't want to tell your body you're in a time of famine. It's not good for fertility. So yeah, that is when you eat and you eat well.

Now, definitely a big fan of the intermittent fasting for bodybuilders. I think that that can be so helpful where they get a lot of benefits, whether it's bodybuilders or wrestlers. Obviously, it's got to be catered to the amount of activity that the athletes have. But I think that can play such a big role.

And people will ask me, "Will I lose muscle?" Whatever muscle you do lose is the muscle you don't want because your body is going to take the most inferior cells, the cells that are the oldest, the most structurally damaged, the organelles or the mitochondria in there that are the most damaged, the least effective. And it's going to break that down and make more effective mitochondria, more effective muscle cells. So you end up with the potential to add more strength and more power to your body. And so that's what I've noticed personally with my training.

Dr. Main: There is actually research study I just read here. You have fat in between your muscle fibers that your body will choose to even get

rid of, making your body even leaner in essence. So yeah, you have so many stores. And not only that, the debris like you said, the old cells. And so growth hormone has been shown to improve. And so it's just one of those things that we've got to understand, that our bodies are so smart. And I think we underestimate the brilliance of our bodies to try to survive and not get rid of the things that it wants. But it gets rid of everything that it doesn't want.

Dr. Jockers: Absolutely. Really good. And so what are the top three to five tips you would want our listeners to know about health and about pursuing a really healthy fasting lifestyle?

Dr. Main: I think the biggest issue with most people with health today is that we underestimate that power that made the body to heal [inaudible]. We have more faith in a stinking pill than that power. And I think that's the biggest one I want to make sure people understand. Our bodies are made to thrive and survive. But we want to make sure that we go back and honor our bodies and put the right things in and get the wrong things out and allow our body to function the way it should.

The fact is that all these diseases in our medical model have been treated with just an outside-in approach instead of an inside-out approach. I think if I were to tell you my passion is to teach people the principle of healing from within. And so then you want to honor and remove any interferences, whether it be emotional, physical, chemical. And so we want to remove anything that's toxic, whether it be stinking thinking, whether it be interferences with the chemicals that we're putting in the body.

So the number one thing would be toxins. Getting rid of all those toxic things that are destroying our bodies function to heal. And so it could be the chemicals, not only from your food but your personal hygiene products. These toxins actually bind to fat. So it makes it very bad for your body because it's not only going to make it hard for you to lose weight because toxins, once bound to fat, your body doesn't want to release the fat. So you want to get rid of those toxins.

Not to mention, neurotoxicity is the number one thing that we're seeing today, where these toxins are embedded in your fat cells in your brain. And so we're seeing all these kinds of diseases with Alzheimer's and MS and ADD. And people are just being drugged up for it.

And so the number one things is get rid of the toxic things that are going into your life both physically and also even emotionally, the toxic people and all that, toxic thoughts that you are less than or you're weak or you're not meant to heal.

And then the number two thing is also removing everything that is

toxic that has been put in the body by man, even sugar. Sugar is one of those things that has been replaced by corn syrup and all these bad, genetically modified foods. So processed sugars. Going back to real foods. And if you are going to just make some changes, go back to real sugars. And just those things that can you start changing.

But then even getting rid of sugar altogether. It's so inflammatory. And it feeds cancer. So just making baby steps to go back to getting less sugar in the system.

The last thing I tell my patients is, when it comes to health, I think that we have that myth of, "Fat is bad." And in essence, everything in your body needs fat for fuel. And we are designed to utilize fat for fuel. And we become sugar burners instead of fat burners. So go back to real, good quality fats and getting rid, of course, of all the toxic fat, hydrogenated fats, just like everything you preach, David, in all your things you do.

But go back to real fat, and don't be afraid of it. As women, hormones, everything—your body is made of fat, your nervous system. So we need fat. And so implement that.

And then lastly, I think the biggest change health-wise, if I were to say anything, is finding that time. I think what did it for me, even though I ate right. I exercised. I did all the right things. I get adjusted. But the biggest thing that shifted my health to where it was deteriorating was just stress. And sometimes we can't get rid of that.

But I had to go back and find my true source of healing. And for me, it's God. I don't know what I would do [without] that source as being the number one thing and just being present with him. For you, it may be something else. I'm not sure. But I think there are sometimes we don't put enough priority in just taking that time and that moment to get rid of all the distractions in this world that are leading us astray from the healing that we need from within.

Dr. Jockers: Yeah, that is so good. And I think that fasting along with really working on our minds, our emotions, and our spiritual walk helps us build resiliency, this ability to adapt to the stressors that we're under. I always tell people, "We can't just sit back and think life's going to get easier. Maybe it will; maybe it won't. But the reality is we can always get better. We can get stronger. We can get more resilient at handling the stresses in our life by being present in the moment, by doing things like fasting, boosting up ketones, stimulating stem cells in our bodies, optimizing our hormones, and then growing closer with God and having more a Father-son or daughter relationship where we can walk as victors in life.

So I think that's so powerful and such a great interview, Rosie. And so thanks so much for sharing. And just any final words of inspiration? I'm sure people will want to follow you on social media and your website. Especially as you prepare for this bodybuilding competition, I'm sure people will want to see how you do.

So I'm not sure where you're hanging out on social media. But be sure to let people know. And I'm sure you should do videos or something like that, especially as you prepare because there are not many competitive bodybuilders who are practicing things like alternate-day fasting. There's so much interest in fasting and ketosis and things like that. So I think this would be a really great path for people to just follow you and see what your results are.

And of course, I'm sure you'll be sharing more. You said you were going to do a seminar in January with your patients. And so this would all be great. I'm sure a lot of the people who are listening would love to follow you.

So where can people follow you? And any final words of inspiration?

Dr. Main: Yeah, definitely. I'm doing a seminar but also creating a webinar for it and just really getting it online like you said. I think that the circumstances in our lives are there for a reason. I have no doubt that this has occurred in my life so I can empower others. So I'm going to do so. I think I've always held back and this because I was either too afraid because, "How could she, being the one who talked about nutrition, fall into this trap of having insulin resistance?"

But we all are not immune to these [inaudible]. But because we go through these trials, we're able to use it for a bigger purpose. And so I'm going to truly take your word for it. And I hadn't even thought about it. But I will start demonstrating just what I'm doing more so. Right now, I already do a lot on my Facebook. That's on Main Health Solutions. And you can look on my Facebook page, Main Health Solutions; my YouTube page, too, Main Health Solutions. Main is my last name (M-A-I-N) Health Solutions.

And then I also have my Instagram, Rosie Main. And the biggest thing that I'm going to probably start to implement is also in my Spanish webpage and everything. So that's where my heart is, too. I'm passionate about the Spanish community. I'm Hispanic background. So I'll be doing this in one that's called "La Dulce Solución" which is "The Sweet Solution." So I'm excited for just what's coming. And you actually inspired me to track this online. So I'm very excited for this, David. Thank you.

Dr. Jockers: Yeah, I think it's brilliant idea because, again, just the idea of being a bodybuilder or a female athlete who is implementing

fasting, ketosis, feasting days, just all the things that we talked about here, people are just not seeing enough of this. And I think that people would be really, really interested in learning more and just your story. Obviously, the Latino population is a huge population. And diabetes and insulin resistance is a big time struggle, obviously for every population, but especially the Latino population. And so I think you are a walking inspiration for them.

And if you're in the Idaho area—you're near Boise. Meridian is near Boise?

Dr. Main: Near Boise, yes.

Dr. Jockers: Definitely if you want a great doctor who's going to love on you, give you incredible chiropractic adjustments, support your health journey, definitely check out Main Health Solutions. Follow Dr. Rosie on social media so we can just all follow her journey here as a competitor who uses fasting strategies to improve her physique, her mind, her body, her spirit and overcome the insulin resistance that she was struggling with.

So thanks again, Dr. Rosie, for being on. And for all the listeners, I'm going to leave you with this last thought. Fasting has this incredible ability to unlock the dormant healing potential within you. It's safe. It's powerful. And it just might transform your life like it has for me and Dr. Rosie here.

So hopefully, you guys are getting tremendous value out of these videos. And if you are, we'd be so honored if you'd consider owning the entire Fasting Transformation Summit for yourself. That way you have lifetime access. You can be listening to these, watching the videos. Dr. Rosie mentioned how she watches Dr. Jason Fung and people talking about fasting when she's fasting. And I've been saying this throughout the summit. One of the best things you can do when you are fasting is listen to summits like this, listen to people talking about the benefits of fasting, about overcoming adversity through fasting because it will inspire your heart, your mind. And you'll be able to push through the discomfort that you may experience. So I think that would be amazing.

And again, if you'd consider owning it, we would be really, really honored and blessed. And we will see you guys soon. Bye-bye.

Intermittent Fasting for Women Over 50

Guest: Becky Gillaspy

Dr. Jockers: Well, hello, everybody, and welcome to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. And in the fasting world, there's a lot of debate about how fasting impacts men and how it impacts women. And so I brought an expert to really talk about how fasting impacts women. Particularly women as they age, and women over 50 because as the hormones shift and change, the way that we eat, and the way that we don't eat, with fasting, can really impact our health. And so, we've got Dr. Becky Gillaspy, hopefully I said your name right there.

Dr. Becky: Gillaspy. That's okay though.

Dr. Jockers: Gillaspy. And so she graduated summa cum laude with research honors from Palmer College of Chiropractic in 1991. And she's worked as an on air health consultant for a local ABC TV affiliate, and spent most of her professional career teaching a range of college courses from anatomy to nutrition. She now works full time, helping people follow their health and weight loss goals through her website and YouTube channel. That has a huge following, right? You're over... how many subscribers you have on your YouTube now?

Dr. Becky: It's over a quarter of a million.

Dr. Jockers: Yeah, you're doing fantastic, really getting this information out; so great. And really honored to have you as part of this summit.

Dr. Becky: Yeah, it's an honor to be here. Thank you for inviting me.

Dr. Jockers: For sure. And so let's start out just going through your story and how you really got into this.

Dr. Becky: Yeah, well, probably it just all started because I had such a fascination with the body, just from even being young. And it's a perfect design. And really, it comes down to if we give it what it needs, it gives us what we want. And this applies at any age but as especially as we get older. Muscle is a great example. As we get into menopause and beyond, men or women, actually, as we age, muscle mass has been shown to be one of the greatest predictors of longevity and quality of life.

But the natural tendency of the body is to lose muscle as we age. So we have to give the body exercise, so we can get the things that we want back. The same thing goes with what we're learning now with circadian rhythm and how timing of our eating influences the circadian rhythm and back and forth. So there's just that fascination that I don't think it's ever going to quite go away.

Dr. Jockers: Yeah, absolutely. I'm totally with you on that. And so let's talk about female hormones a little bit. And so what happens to the female body as we go through the different stages, perimenopause, menopause, post menopause; what happens there?

Dr. Becky: Yeah, so for women with reproductive hormones, the ones we think of are estrogen and progesterone. And when we're in our reproductive years, we see that they have a relationship. So throughout the monthly cycle, estrogen kind of takes kind of an ebb and flow through the month. Whereas progesterone is low at the very beginning and then when ovulation hits, it spikes up. That's how things are going when we're in our normal reproductive years. When a woman gets into her 30s and 40s, she starts to enter perimenopause, and doesn't really realize anything is different, because the only thing that's different is that she might skip ovulation every couple of months.

And we don't really experience that in any significant symptom way. But what happens is that because we're not getting ovulation, progesterone doesn't take its jump up. So now what we have set up is a time throughout the entire month where estrogen is high, progesterone is low, and we call that estrogen dominance. And that by itself has some consequences for us with weight gain. So even before we start to really experience the outer signs and symptoms of menopause, we're already starting to set up some issues where it's easier to gain weight.

Dr. Jockers: Yeah, because estrogen really has kind of a growth effect on the body, it's telling the issues of the body to grow. And obviously, weight gain would be a factor with that.

Dr. Becky: Right, as it's becoming more and more dominant. And then as we move on in our age, and we get closer to reaching menopause, or the woman will experience irregularities in her menstrual cycle. So she might have a very heavy period that lasts for three weeks, and then have nothing for three months. And as things progress, then there's a period of time over 12 months that the woman doesn't experience a period at all. And then that signifies menopause.

Kind of the interesting thing about menopause is it's a one day event. You know, we don't tend to think of it that way. But it is, by definition, the one year anniversary from your last menstrual cycle. And then after that point, then a woman has a new, normal low of estrogen and progesterone. And that has consequences as well for weight gain. A couple of things. It's been shown that low estrogen is tied with low resting and energy expenditure, REE. Which basically means that it takes fewer calories for us to run our body's...

Dr. Jockers: Your metabolism goes down, yeah.

Dr. Becky: Another thing that women experience is an increased propensity to put on belly fat and that seems to be related to low estrogen. They've never really worked out the mechanism of why that works. But it's something that I think most women, after they've reached menopause, will start to notice that even if they were pear shaped to begin with in life that they have now more of an ability to put on weight in the belly. And that, of course, has issues with metabolic syndrome and things of that sort.

Dr. Jockers: Yeah, yeah, for sure. And so a lot of women feel like, "Well, as I got into my 40s and 50s, I couldn't do what I was doing in my 20s and 30s." And that has to do with that starting well in the beginning, when they're in the perimenopause, they don't have a big drop of estrogen, but it's just this disproportionate ratio of estrogen to progesterone. And then as they hit menopause, go post menopause, now all the hormones go down, and so they're not able to burn fat and have that same metabolism. Let's talk about some other symptoms. I know a lot of women talk about hot flashes, different things like that. So let's talk about some of the other symptoms.

Dr. Becky: Yeah, so this all plays into what I call the perfect storm of weight gain, once we reach menopause. So we experience other symptoms other than just belly fat. Belly fat, well one of the many things that it will do, it will increase our insulin resistance in our body. Insulin resistance is a very common weight loss barrier. Basically, insulin is our nutrient storing hormone. So when we eat, its job is to take those nutrients that we took from the food and put them in storage or put them in cells where they can be burned.

Well, when we become insulin resistant, our cells are literally resisting insulin's actions. So we end up with high blood sugar, we end up with high insulin levels and that... you know, I said insulin is the nutrient storing hormone, well, it only works in one direction, right? So for storing, we're not able to pull energy out of storage, in places like our fat cells. So this is kind of the start of the perfect storm. So we have this low estrogen, we've got more belly fat that's contributing to insulin resistance. Insulin resistance causes weight gain. Also causes cravings because our cells are not seeing the nutrients, so they're asking us for more. And so that kind of loops around and gives us more belly fat.

But then we have other symptoms, like you had mentioned, like hot flashes, and they can interrupt sleep. Well, sleep can interrupt... or can be a leading factor into insulin resistance. And if we have poor diet on top of that, if we aren't exercising like we used to when we were younger, we have more of that. We have chronic stress. So all of these things are coming back into play and creating that perfect storm of weight gain.

Dr. Jockers: Yeah, vicious cycle, exactly. One thing compounding on the next and high insulin also activates inflammatory gene pathways too. It activates inflammation throughout the body.

Dr. Becky: Yeah, it's not just about weight gain, for certain, yes. Inflammation is the underlying problem for so many chronic diseases.

Dr. Jockers: Yeah, and even those fat cells too. I know, research has found that they're actually releasing inflammatory cytokines as well. So the more body fat you have, the more inflammation you're producing. And that's going to affect your bone health, your joint health, your brain; all these different factors. So yeah, it's really important. And I know you're an expert at helping women who are going through these seasons of change, in particular as they hit that menopause season, to help reverse these kind of inflammatory conditions and help them lose weight. And so, fasting is one of the tools you have in your tool belt. So how do you approach that with them?

Dr. Becky: Yeah, fasting is a great tool for women at menopause because it helps us to disrupt that perfect storm cycle. And one of the ways that it does that is it works with insulin resistance. Intermittent fasting, as we're starting to learn more and more about it, is really beneficial because it allows us to work with our body's natural circadian rhythm. We have that circadian rhythm that kind of wakes up with the dawn of the day. But we also have peripheral clocks in our organs that are responding to food intake.

And so when we start eating, our body is the most insulin sensitive as it will be. And so by intermittent fasting and just shortening the duration

of hours that we're eating in a day, we are enabling our body to take in its nutrients at a time when it is most able to handle those and process them, and put them where they need to be. So that is one way intermittent fasting helps us. Another thing is that it simply decreases the amount of insulin that we have because there's no food coming in. Insulin's job is a nutrient store, right? So if there's no nutrients there, we don't have to rely on it. And that allows us to increase insulin sensitivity as well.

I would also say that while this isn't a physiological reason why intermittent fasting is so important for women at menopause to pay attention to, it satisfies what I refer to as the three E's. And those mean that it's easy to do, it's enjoyable, and it's effective. And when we have those three E's in place, we comply, we stick with it. I say intermittent fasting has a stickiness factor because when someone tries it, they tend to stick with it, which is not common with diet changes. And it's easy to do because really, you're not doing anything. So it's freeing up time.

Dr. Jockers: Yeah, exactly.

Dr. Becky: Yeah. It's enjoyable because unlike diets, you can practice intermittent fasting and still partake in dinner with your family or your friends who might not be on your diet. It's certainly effective.

Dr. Jockers: And to be devil's advocate on the enjoyable, a lot of people if they're used to eating three, four, or five meals a day and they really enjoy food, they would think, "Oh my gosh, I've got to give up a meal? That's not going to be enjoyable." But the reality is, you actually feel better as you adapt to it. It's almost like an exercise high in a sense, you just feel you have more energy, better mental clarity. You're able to be more productive and efficient. And just like you said, it saves time, right?

It saves energy that you would normally putting into making food and you can still eat, like if you enjoy certain breakfast foods, ideally, healthy choices; you can still eat those at a different time. Like I never eat breakfast. My wife and I, we don't eat breakfast but we have breakfast for dinner on Sunday nights where we have eggs and chicken sausage and kale and onions and we'll make keto pancakes and stuff like that. So we can still change it around and do that if you enjoy foods in a certain period of time.

Dr. Becky: Yeah, I agree. And I agree with you that of those three E's, probably the one that perks people's interest is enjoyable. It's like, "Enjoyable? Well, I enjoy eating. So..." and I certainly get that. And I also get that we have to overcome a lot of mental hurdles that we grew up with. A lot of mantras that we have just been told over and over again and they seem like they would be fact because we've heard them so long. "Breakfast is the most important meal of the day." Not that you

have to, you know, you could have breakfast and then fast later, but most people choose to skip breakfast.

"If I skip a meal, I'm going to lose muscle." "Eating throughout the day, every few hours revs up my metabolism. So now I'm going to hurt myself." So we have to... it's hard to go against those mantras because mom told us that, grandma told us that, society, like news blips tell us that. But the reality is that the research on intermittent fasting shows us that those things are not true. Intermittent fasting for skipping a meal is not going to be enough to break down muscle. Our bodies are very well equipped to handle periods of time without eating.

And we have stored nutrients that it prefers to use, you know, stored glucose, we have fat that it will opt to burn before it's going to burn muscle. Breakfast doesn't... you know, our hormones are what wake us up, right? Cortisol starts rising before we even wake up, before the sun comes up. And that's what really revs us up and gets us prepared for a day. So it's hard to go against those mantras and step out and give this a try. And there's a lot of fears there, which I understand.

Dr. Jockers: Yeah, absolutely. And so, let's say somebody is ready to get started with intermittent fasting. Okay, they're used to eating oatmeal for breakfast, let's say a big chicken salad for lunch and meat, potatoes, and vegetables for dinner. And that's their normal cycle. They're like, "You know what? I'm going to try intermittent fasting. And I think I'm going to try missing breakfast." Okay, what should they experience in the beginning and then as they go forward with that?

Dr. Becky: Yes, I actually have a forum where I have members and I actually posted that question to them not too long ago, too. To get kind of their feel of how they felt about intermittent fasting, initially, and then how they felt after they kind of became pros and understood it a little bit better. And it was interesting, there was a lot of split ideas. Some had a lot of trepidation about getting started and, "Would I be able to do this? Am I going to starve?" and things like that. And then others were gung ho to go into it.

I find that when you start, you could still have three meals in a day, just tighten up your eating window. And I think that's a more comforting way if you have any trepidation about trying it. So I recommend that people start with what I call the easy method, which is 12/12 intermittent fasting. It literally means split your day into two. So you have 12 hours where you're consuming all of your calories and you have 12 hours where you're not.

One of the easiest ways that I feel, to get yourself comfortable with intermittent fasting is to eat in a way that stabilizes your blood sugar. And that has so much to do with your food choices. We have different

nutrients in the foods that we eat and they affect our blood sugar differently. And so we have sugar and refined carbs at this end. When we eat those, they cause a spike and insulin comes in and rushes that into our cells, but then we dip down. And if we're eating a lot of refined carbohydrates, and these would be like muffins for breakfast or waffles, or pancakes or you know, those types of things. Even like a burger bun, pasta; these types of things that are going to break down very quickly.

If that's the mainstay of our diet, we're making intermittent fasting much harder for ourselves than we have to because when we spike up and then we dip that dip is that time where everyone's experienced that like insatiable hunger. It's like, "Oh, my goodness. I have to get something to eat." It's our body's warning us that, "We're low here. We need to get some nutrients and celery is not going to do it." It's looking for a Tootsie Roll or something like that, something quick and easy.

Dr. Jockers: Yeah, they call it feeling 'hangry'.

Dr. Becky: Exactly.

Dr. Jockers: Where you're irritable and hungry and that reactive hypoglycemia that takes place.

Dr. Becky: And getting away from them, there too, these are scary things to be facing, if you've had a struggle throughout life with losing weight and things like that. Shortening the amount of hours that you're eating, getting rid of refined carbs and what I call zero sugar. I have a very simple strategy I call 0,1,2,3 strategy. It's just for daily habits, that when you do them, they really enhance your ability to do intermittent fasting and in fact, the three has to do with that.

So, it stands for zero sugar, one large salad, two cups of cooked non-starchy vegetables and three hours before bed, stop eating. So zero sugar, a lot of times when you start to say that walls go up in front of people and they're like, "Oh, don't take my sugar away," because it is an addictive substance. There's no shame in wanting sugar. One of my favorite sayings is, "I was a terrible sugarholic and I have the cavities to prove it." I was hooked on sugar from first thought in the morning till the end of the day. So I totally understand that.

But what the 0,1,2,3 strategy does for you is it helps you to add volume to your diet as you're subtracting the sugar. And of course that salad and the vegetable, you can have healthy whole fats added there. And proteins, you know, nuts and seeds. Avocado slices are great to keep hunger under control, keep your blood sugar stable. So the whole concept is to keep your blood sugar stable, so that you're not dipping into that insatiable hunger and those cravings.

Dr. Jockers: Yeah, that makes sense. So, obviously you're focusing on trying to keep your blood sugar stable, so you're not getting these ups and downs, and you start them with 12 hours, which is really a lot easier than most people think. It's like 7:00 am to 7:00 pm. If you wake up at 6:00 am every morning and you finish your dinner at 7:00, let's say but you've got to get up at 6:00. If you just drink water, drink eight to 16 ounces of water in the morning, you won't even feel hungry until at least 7:00. So it allows you to kind of push that eating window and tighten that up pretty good. And then where does somebody go from there?

Dr. Becky: Then you can just simply add an extra hour at a time or however you want, to your fasting window. So you can extend that to 13 hours and 14 hours if you want to just go step by step. 16/8 has become kind of the accepted and often studied way of performing intermittent fasting.

Dr. Jockers: So that would be 16 hours fasting, eight hour eating window, like 10:00 am to 6:00 or something like that.

Dr. Becky: Yes. And somebody could actually eat three meals if they wanted to in that eight hour window.

Dr. Becky: They could certainly, yes. Or you could have two meals and a snack. The challenge that a lot of people will have but yet an important part of success with intermittent fasting is the not eating late at night. And with the 0,1,2,3 that was the three, three hours before bed, stop eating. That not only helps with your metabolism, it's also going to help you sleep better because you're not going to be putting energy into your core, which is creating heat and keeping you from sleeping. And that is a challenging time for anyone but it's important.

One thing that I talked about with women is using something I call stoppers. It's simply a food, drink, or activity that will separate you from the act of eating after dinner. So that your brain has time to register that you're full and you can move away from that because you know, we have this primal thing in our bodies that we just want to keep eating once we start. I think that was probably because we didn't used to have 24/7 convenience stores. You had to eat when the food was available. But we can't do that in today's society. So we have to have a strategy for stopping.

I find that just putting a piece of sugar free gum by your dinner plates and popping that in almost unconsciously right after you're done, it will change the taste in your mouth. If you don't want to use gum, you can brush your teeth, floss your teeth. You know, anything like that that's going to change the taste in your mouth or give you time. A cup of hot tea that has to be sipped will give you that time to separate because you want to start that fasting window at least three hours before bedtime.

Dr. Jockers: Yeah, absolutely. And I think eating late at night can definitely be addictive, right? So a lot of people get into this cycle where it's just kind of what they do. And oftentimes, it's related to poor sleep habits that kind of compound on themselves. And also, a lot of times, a lot of emotional issues are just not being dealt with that in a sense, we can easily use food to kind of drown it out. You know, going deeper and addressing certain emotional issues too.

So I think it's really a good idea to have those stoppers and kind of create a ritual around this idea of, "Okay, I'm finished eating for the day. Now my fasting is going to start at this point." So yeah, I think that's really, really helpful. And let's say you've got somebody that possibly works late at night, how should they kind of tailor their window? Let's say they work, I don't know, 3:00 to 11:00 pm or 4:00 to 12:00, or something along those lines. Because a lot of times they're working and then they get home and then they're like, "I just want to eat something and go to sleep." So, what could they do?

Dr. Becky: Yeah, it's a challenge. Shift work is a challenge and it's certainly been shown that it's a challenge for your metabolism to work in strange hours like that. But there is Dr. Satchin Panda who is kind of a leader in time restricted eating, which is what we're basically talking about, restricting the number of hours that you eat, had done some work with this. And had discussed this, like night shift work.

And he found that despite working crazy hours, shrinking down the number of hours that you are eating is still going to give you some benefits. Now, three hours before bed, stop eating, well, you might have to get creative and it might just not work out for you exactly. I would try to work toward that. You might need to have a larger lunch and then have a small dinner at work that can tide you over; that can be effective.

Dr. Jockers: Yeah, absolutely. Or for those people, they may try eating breakfast and lunch, and then fasting through dinner and just hydrating well in the evening; and seeing how they feel and how they respond with that. And I think it's, were very used to this kind of idea that oftentimes, eating can be just like a break for us in a sense. So I think it's kind of re-patterning and what I always find is, it usually takes roughly three to maybe up to seven days to kind of break out of a certain habit. Like a lot of people are like, "I'm so used to eating breakfast."

Usually for me, I've seen people after about three, five days, maybe for some about a week of missing that, they're no longer hungry in the morning. They kind of reset some of those hunger hormones like ghrelin. And kind of the same thing with dinner too. Like, I never thought I could fast through dinner. I always thought, "Well, I have to eat a good dinner before I go to sleep." And now it's like, I do it two days a week. I don't eat dinner. I just eat lunch and that's it for the day.

And I feel good. I actually sleep better. My heart rate variability is better. I feel amazing, right? So a lot of these things can be adapted to, which can help. Now, I think one thing that's important we need to discuss is when... because a lot of times we can get a little bit overemphasized, the fasting. We see the healing potential of fasting and oftentimes, we can start going down that route. But how important is eating really good quality foods and even feasting when you are eating in your eating window?

Dr. Becky: Well, the quality of foods is absolutely key because if you're eating junk food, I think you're going to have a really hard time losing weight for one thing, if that's your goal or getting the health benefits from it. But also just sticking with it because you are so up and down on your blood sugar. So yeah, whole foods. What I like to look at are all of the aspects. So healthy fats, I think we did ourselves a disservice by being so anti-fat for so long. There's certainly unhealthy fats. But there are certainly healthy whole fats.

And those foods will help to satiate you, keep you feeling full for a long time. They leave your system very slowly. It's not going to have a big bumper change on your blood sugar. They're wonderful for intermittent fasting. So, what are we talking about with that? So whole fats or plants and animals. So we have plant world, we have nuts, seeds, avocados. In the animal world we have meats, fish, chicken... well, chicken is not a real high fat but we have different oils and fats that we can add to vegetables.

Fat is a great thing to add to vegetables. It helps us to absorb the fat soluble vitamins and minerals in there. With proteins, we can just get a moderate amount of protein to get a sufficient amount in our bodies. Carbohydrates run the gamut, right? So we have, on one end, we've got the sugary treats and then on the other end, we've got the non-starchy vegetables. So we want to go eat as much from this end, this non starchy vegetable. But yes, whole foods. And intermittent fasting, it's not a home run just out of the park, "Oh, if I just don't eat, I'll lose weight." Well, it might be possible, however, you have to work with your body. Your body does need some nutrients so that it can, you know, go for a long time. So diet is definitely important.

Dr. Jockers: Yeah, absolutely. I always tell people, it's not really about eating less, you know, a lower amount of food, it's about eating less often. So, eat till you're satiated. When you do eat, just don't eat, you know, for this long extended period and try to cut it down to three meals max, one to two meals, if you're able to do that. And when you do eat, if you're eating two meals, eat really well. Eat until you're really satiated. If you have gastrointestinal issues, burping, belching, you know, you've got indigestion, you're feeling cramping, things like that; you may be overeating.

However, if you're not noticing that then you probably haven't overeaten. Your body is digesting and assimilating it and that's going to help you feel satiated, eating really, really well there. So, one other thing is... you know, you really live this lifestyle, so I want to know, what does your day to day lifestyle look like? Like, what are you doing from the morning when you wake up? What do your meals look like? What are you doing to kind of get your mind ready for the day? What does your fitness look like? I think our listeners would really love to know from an expert like you, Dr. Becky, on how you go about your day to day routine.

Dr. Becky: Yeah, well, so I get up between 6:00, 6:15 in the morning. My husband and I come down and have coffee and sit, and oftentimes, watch educational videos from different...

Dr. Jockers: Now, is that black coffee or is that like coffee with butter or something?

Dr. Becky: I drink black coffee and my husband usually does in the morning and then he'll put cream in later. He tries to keep to black coffee during most of his fasting period. I started drinking coffee because I was in college and I wanted the caffeine benefits. So I just drank it black and it's just what I've gotten used to. I never really was much for cream. Not that I'm opposed to it but...

Dr. Jockers: Yeah, and the research actually shows that caffeine in general and coffee can enhance autophagy and enhance the benefits of fasting. I always tell people, if you drink coffee and then you notice you have more cravings a few hours after, you're probably not responding well because there are some people that are poor caffeine metabolizers or maybe they've got a food sensitivity to it. But if you drink coffee, you really should feel great. And if you feel great, there's nothing wrong with it.

Dr. Becky: Coffee has a lot of health benefits. It can... if we drink it too late. It's got a long half-life. It's like six hour half-life. So, you know, six hours after you drink it, half of the caffeine is still in your system. So if you're drinking it until four o'clock in the evening, you know, and possibly getting some sleep issues. Some people will be sensitive to it and get jittery and things of that sort. But yeah, it has a lot of antioxidants which are beneficial to our cell health. Autophagy, it does help.

Now, I think the only ones I've ever seen were on animals, studies and I'm not totally sure on that but still, it's promising. Autophagy is our body's self-cleaning system. So it's our way of getting in there and repurposing cells, getting rid of damaged cells, recycling some to make new proteins and things of that sort. So, definitely benefits to coffee. But yeah, so I'm definitely a coffee drinker and I'll drink it throughout the

morning, but I'm not eating yet.

I will exercise most days of the week on a fasted stomach and I will do things, like I do weight training on Mondays, Wednesdays, and Fridays. So I'm lifting either upper body or lower body on alternate days, and in between there, I do some type of aerobics. Sometimes I'll do high intensity interval training if I'm really on a program, and sometimes I'll just walk, just to get some movement and exercise in there to combat all the sitting that I do during the day.

And then I will break my fast anywhere... I will switch it up. So I really do listen to my body. I will always intermittent fast for a minimum of 13 hours. But there's a lot of times I'll just go right to lunch. So I might finish eating the night before at 7:00, 7:30 and I'll have a large salad. One of my strategies, I have a salad every day, 95% of the time, which people might say, "Well, that sounds boring." Well, it's not boring if you know how to make a salad. You put good healthy fats on it and I look forward to it every day. So that's usually what breaks my fast.

And then from there, I rarely feel a need to have a snack in the afternoon but if I do, raw almonds are a lot of times the go to for me. I will also use full fat yogurt and blueberries as either a snack in the afternoon or if I have breakfast that day, I will have that. So there's a lot of times I'll do two meals and a snack or three meals, you know, just in a condensed period of time.

Dr. Jockers: So, your total fasting window is like a 16/8, you're usually doing?

Dr. Becky: It's anywhere... I'm on maintenance, so I'm not really like looking to lose weight. So, really, this for me personally, I look at it as just a way of helping me to easily maintain my weight. And so I will fluctuate and I listen to my body. So if I'm feeling like at 10 o'clock, I want to eat something and it's only been 13 hours since I ate last, I don't stress over that. I just go ahead and maybe have yogurt or something of that sort. If I am really busy and working on my computer, and working on a project or something like that, honestly, I won't even think about it. And my dog usually is the conditioned one who decides that it's lunchtime, and then it perks my mind up to go eat. So, I would say my typical fasting is 13 hours to 16 hours.

Dr. Jockers: Okay, yes. So you're really listening to your body and just being intuitive about when you're starting out that eating window.

Dr. Becky: Yeah, I do. Now if you're just getting started and depending on how much you want to change your diet, if you're really not that interested in changing your diet, you're just looking to try intermittent fasting, I would say that you're probably going to be happiest with your

results if you are being more consistent on a daily basis. If you're really working with dietary changes and you're eating whole foods, and staying away from the refined carbs, I think you can play with it a little bit more. So you might want to do 16/8 intermittent fasting five days a week and then on the weekend, have three meals. You can do that. You have the freedom with that with intermittent fasting, if your diet is good.

Dr. Jockers: Yeah, exactly. It doesn't always have to be exactly the same eating window, fasting window. And what I found is that men and women that are overweight, it tends to be a lot easier in a sense to fast. And then women, especially very lean women, if they're doing too tight an eating window for too long, too many consecutive days... not everybody, some do great with it, but some women can really have more stress, trouble sleeping, fatigue, hair loss, different issues like that.

And so kind of varying it a little bit, adding a little bit more feasting or even doing like, every other day, doing an intermittent fast or even crescendo fasting where you're doing it two days a week, like non-consecutive days, like a Monday, Thursday, or something like that can tend to work better. So I think different body types are going to respond a little bit differently.

Dr. Becky: Yeah, I agree. And there's a lot of variations in the way that you can do intermittent fasting. The only one we've really touched on is the time restricted eating, restricting the number of hours in a day. But you can do alternate day fasting. My husband and I went through an experiment with that and found that it was very doable. A modified alternate day fast, I should specify. And what that meant was that every other day you were still consuming calories but much fewer than on the other day.

Dr. Jockers: I want to say, 500.

Dr. Becky: Yes, fasting days, they typically go around 500. They technically, I guess, would like you to go about 25% of your normal, but they kind of just zero that in for five, 600 calories for males. So it's a lot easier for people just to kind of go with that and then eat normally on the alternate days. And that is, you know, what it comes down to with intermittent fasting and your comfort level, is your comfort level.

What is your lifestyle like? Does that work for you? Then that's great to do alternate day fasting like that. Or is it better for you to skip breakfast because you have work meetings and things like that and it just fits your lifestyle? But these are trial and error and trial and error is very important with intermittent fasting because everyone finds their own kind of groove that works for them.

Dr. Jockers: Yeah, you're so right about that. I think this is something

you've just got to get started with. And in a sense, fasting really helps you listen to your body better too. I think that's a really important intelligence to build. It's really like a skill that you're developing, where you're listening to your body and how your body is responding to different things. And I mean, I've been intermittent fasting since 2005. And really, I mean, honestly, there wasn't much research on it back then.

I just found that it really helped me. I used to have irritable bowel and it really helped me with that. It helped me actually maintain muscle mass, believe it or not. But I actually found my ideal... it took me like 12 years. It wasn't until like, 2018 till I really found exactly the fasting strategy that seems to work best for me. What I do, five days a week, I eat two meals, and usually in like a six hour window. And then two days a week, I just eat one meal. Now when I'm eating meals, I eat a lot, I eat very large meals. And so I'm consuming a lot of calories in those meals.

But I find just that my energy's better, my muscle tissue. I'm stronger, I recover from exercise better. My brain feels just feels fully alive on a schedule like that. But again, it took me over 10 years of experimenting with it before I was able to find that. So I think with all the Facebook groups and all the summits like this, and people like you on YouTube, there's more information out and people can shorten that window before they find what works best for them.

If you just get going with this, after a few months, I think you'll really start to identify where you're seeing the best results. You've got to listen to your body and your energy. It's not just about weight loss, like you talked about, I mean, you can be very lean, thin people, like me, I'm 8% body fat, you can be lean and really get great benefits. I do it for energy, I do it for mental clarity. And you've just got to experiment with it. Anything to add to that?

Dr. Becky: Yeah, well, just the fact that you had mentioned being in a group and the strength of community. And it is wonderful that intermittent fasting has been so embraced by many different healthy diets. It doesn't matter what diet core that you follow, you'll find that proponents of that utilize intermittent fasting. So it has been one of those things that ties us all together and we can pretty much all agree on that there are benefits.

But the strength of community and especially for women over the age of 50, when we think that we have all of these preconceived notions of how we're supposed to eat that have become so ingrained in us. Knowing that other women are doing this. In the forum that I participate in a lot in my program, a lot of those women are over 60, over 70, doing intermittent fasting on a regular basis, and having no problems.

Now, of course, if you're on medication or if you have a condition that is

affected by your blood sugar, you do have to be smart about it before you start that. But if you are a generally healthy person, regardless of your age, you can find the benefits of intermittent fasting. You just have to ease yourself in, see that you can do it, and feel good. And then just close that window a little bit more and a little bit more, and you'll start to see the benefits.

Dr. Jockers: Well, that's great. And Dr. Becky, this has been such a great interview. You've just given us so many great action points, action steps, and insight on intermittent fasting. And any last words of inspiration and where can people find out more about you and also the program and the community support that you provide?

Dr. Becky: Yeah, just the fact that I think, despite being over 50, intermittent fasting has been found to be safe to do if you're in generally good health and you can give it a try. Just shorten up your eating window and I think you'll do fine. If you are looking for a place to start with getting whole foods back into your diet and get rid of the sugar, which is going to help stabilize your blood sugar, they can get my 0, 1, 2, 3 strategy for free over on my website, which is drbeckyfitness.com. They can find me on YouTube, by just searching YouTube for Dr. Becky Fitness, I'm sure I'll come up, and same with social media. So, those would be the avenues that people could find me.

Dr. Jockers: Well there you have it guys, its Dr. Becky Fitness. Definitely check her out. YouTube, she's got a lot of great content on there. So definitely check that out. And I want to leave the listeners with this one last thought; your body is an incredible self-healing organism and fasting really has the ability to unlock your dormant healing potential. No matter what you're struggling with, the healing power is there. We just need to unlock it and remove the interference. And fasting has an amazing ability to do that. It's safe, it's powerful, and it just might transform your life. So, start applying the principles that we talked about today and I believe that you'll see amazing results. We'll see you on a future interview. Be blessed, everybody.

Fasting to Stimulate Stem Cell Regeneration

Guest: Edward Group

Dr. Jockers: Welcome to The Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind, fasting. I'm your host, Dr. David Jockers. And in today's interview, you're going to hear from a guy named Dr. Ed Group of the Global Healing Center. And Dr. Ed is a good friend of mine. And he is really a guru when it comes to fasting and detoxification.

And so I asked him to come on to talk about extended water fasting and stimulating stem cells and kind of this idea of regenerative medicine through fasting and detox. And that's really what he's going to go through. You're going to get so much out of this interview. He's going to talk a lot about autophagy and how the body breaks down these old decaying cells. He's going to talk a lot about stem cell regeneration. It was one of my favorite interviews of the summit. You guys are going to love it.

If you want to look at Dr. Ed Group, if you want to look him up, it's globalhealingcenter.com. He has got incredible credentials and just provides so much value here for us on the summit. So I know you guys are going to love this interview. So stay tuned, and I know you'll enjoy it. Leave your comments in the comments box below.

Dr. Edward Group: Hi! I'm Dr. Edward Group. And I'm the founder of the Global Healing Center. Our mission is to teach the world the root cause of disease and to teach that anyone can heal their body using natural methods. Today, I'd like to introduce the benefits of water only fasting.

But first, I'd like to tell you a quick story about a fasting expert. His name was Arnold Ehret. Arnold Ehret was a German professor. And he was also the author of books on diet, detoxification, fruitarianism, fasting, health, and longevity. In the early 1900s, Arnold knew the benefits of water only fasting.

And to prove to the world he would not die on water alone, he was sealed in a glass cell by a notary public in the presence of two physicians. He stayed in that cell under observation forty-nine days and nights, with nothing but water.

The interesting thing is after his fast, he stated, "Humans are dying from the energy it takes to digest ten times as much food as the system needs." He also said, "Humans are the sickest animals on earth. No other animal has violated the laws of eating as much as humans. No other animal eats as wrongly as them." Now that's a pretty bold statement.

So what exactly is water only fasting? Water only fasting is exactly what it says it is. It's abstinence from food, but not only from food, but from anything in the body. That means the only thing that you're putting in your body all day long is water. And that's not water and lemon juice, that's not water mixed with any salt. It's only water.

Water only fasting dates back thousands of years. It's mentioned in all religious texts. And the purpose of water only fasting is it allows your digestive process to stop. And we'll get into that a little bit later. But water fasting is the only rapid healing method in the world. It was the original way to heal the body. It's God's original and only medicine, with sunlight, with rest, with clean air. It's why detoxification and cleansing always works when you look at the root cause of disease.

Healing is not something that needs to be very technical and we have to go to multiple doctors. I mean our body wants to heal itself extremely rapidly. So my job and what I've been doing for the last twenty years is look at the simplicity of it.

If you know the root cause, which is all of the chemicals and the toxins in the food, in the air, in the water, and the stress that we're under, and the internal environment in which we live becomes toxic, and we live in an external environment which is toxic, that's the root cause of disease. So healing is simple when you look at what and how effective the body can heal itself, for example, with what we're talking about today, water only fasting.

And that's why years and years ago people would go to the old springs. There were springs inside or outside of all communities and all towns. And a lot of the healers back then would send you to drink the water in the spring. And that's all they would do.

Did you know that on May 18, 1933, when Gandhi was in the tenth day of water only fasting, he was examined by his physicians? And one of the physicians stated that despite his age of sixty-four years, from a physiological point of view, the Indian leader was as healthy as a man of forty. Now Mahatma Gandhi used to fast one day every week. And following his assassination at the age of seventy-eight, the doctors at his autopsy described how Gandhi's inner organs looked like those of someone half his age.

This is how effective water only fasting can be, and not only effective, but very cost effective as well. So you might be asking, well, if it's so effective to do water only fasting, why are doctors not using water only fasting? It is the most rapid way to heal the body. Well that's a dark secret that they never want to get out. Doing the research and looking into the practitioners that have successfully used water only fasting in the past, and even ancient Egyptians, I mean it goes back as far as you want to trace it.

When we've come into this modern era in the last hundred to two-hundred years of prescription medications and the money, that is why some of these secrets to healing have been lost, burned, or practitioners have been prosecuted for actually using these techniques. So the bottom line is why are doctors not using water only fasting? Well, there's no money in it, they're scared, they're taught not to in medical school, and because doctors are only taught to prescribe medicines for ailments.

Now I talked about addressing the root cause of disease earlier. Are medicines addressing the root cause of disease? No, they're not. All they're doing is covering up the symptoms of disease. So you have the root cause of disease, and then you have the symptoms of disease.

And this is purposely done, to continue to never address the root cause, because if you address the root cause, you're going to heal yourself. If you address the symptoms, you're not ever going to heal, and you're going to be reliant on medications and the medical system forever. And they're going to drain as much as money as they possibly can from you.

So one of the areas to study when you look at water only fasting, and because it's tied to the digestive tract and stopping the digestion, we have to look at what we have been conditioned to believe. And we have been conditioned to believe with the commercials and with the schooling that we go through that we need several meals per day.

The food industry is a huge operation, just like the pharmaceutical industry. And the food industry and the big agricultural companies want you to be eating nonstop from the time that you wake up in the morning

until the time that you go to bed at night, because the more you eat, the more money that they're going to make. So we're taught that we need to eat multiple meals a day.

No other animal in the history of the world on the planet has this. All other animals fast from time to time. They might not be able to find food for long periods of time. Bears fast in the winter. Animals fast when they're hurt. So the only species on the planet that has been taught to consume food all day long is the human species.

So what exactly happens when you start fasting? What happens during water fasting or water only fasting? The first thing that happens really is fasting is a rest. It's supposed to be a time where your body can heal itself or a physiological, biochemical vacation.

So when you start water fasting, after your body has gone through its glycogen deposits, your glycogen stores, what happens after about seventy-two hours is you'll reach a state called ketosis. And ketosis is a state where your body is fueled by ketones. And your body is now burning fat for energy. So instead of potentially breaking down muscles, your body breaks down fat stores and produces ketones, like I said, for your brain fuel.

Now this is a big misconception, because people think, oh if I fast and I drink nothing but water, I'm going to lose all my muscle mass. Well multiple studies have been done on intermittent fasting and on water only fasting that prove you will not lose any muscle mass.

As a matter of fact, I did an eighteen-day water only fast. And I lost a tiny, tiny, tiny amount of muscle, but that's because I wasn't in the gym working my muscles out, because during a long-term water only fast, you want to rest and let your body repair and utilize all of its energy sources for repair and autophagy, which we're going to talk about soon.

So when you temporarily stop consuming food, your body no longer has to perform its most energy consuming function, which is digestion. Breaking down food is one of the most strenuous processes that the body goes through. In fact, it's estimated that digestion, absorption, metabolism, and the storage of nutrients from meals can account for as much as fifty percent of your total daily energy expenditure.

Now think about that. There are practitioners that I've interviewed that said the perfect diet for somebody is to eat one healthy live raw meal a day, which consists of lettuce, vegetables, nuts, seeds, etc. But if you can imagine one meal taking fifty percent of your energy stores every single day for the digestive process, can you imagine what happens when you eat four meals, three meals, and cake and ice cream, and GMO foods, and all of this stuff?

This is the reason why the world population is suffering with so many diseases, because our body doesn't have enough energy to break down all of these meals that we're consuming. We're eating five times as much as we need to eat to maintain proper health.

So as the digestive system stops when we start water fasting, this creates what is called autophagy. And the beautiful thing about autophagy, which I'll explain in a second, is that it also works in conjunction with your body producing stem cells, your own body producing natural stem cells. So what is autophagy? Autophagy is when your body starts to decompose and burn cells and tissues which are diseased or damaged or that are aging or that are already dead.

And autophagy, by the way, usually starts around day three. So your body feeds itself on the most impure and inferior materials, such as those dead cells that are floating around, the toxic accumulations, the tumors, the abscesses that people have, any kind of damaged tissues, abnormal fat deposit, etc. So right at the three to five days after you begin your water fast, you're going to start to notice this, because the body knows now that you're not eating.

And also at this point, you're going to have increased levels of growth hormone, which will help you maintain the muscle mass the lean tissue during your fast. So almost all of the energy you need for basic metabolism is now going to be supplied by fatty acids and ketones. Just imagine that three days into your fast that your body actually turns into itself and starts going like Pac-Man everywhere in your system and targeting anything that's abnormal.

This is how amazing your body is. And it just starts attacking and then starts repairing all of your cells. So then your body starts producing new stem cells. And your immune system begins to regenerate. Your body starts to regenerate itself.

So during the autophagy, the body breaks down all the unhealthy cells into their component nutrients. For example, if you're going to break down a cell, inside the cell the body gets the calcium and magnesium and fatty acids. So the body disassembles all of the cells and then uses those components and rebuilds them as healthy cells wherever you need them in the body. And it uses this material to repair the organs and the tissues. So basically the autophagy in stem cell is biological recycling. It's your body recycling itself.

Autophagy and stem cell production is the strongest anti-aging therapy that you can get. It's the best, most effective system in the world. For example, there was a doctor, Dr. Carlson and Dr. Kunday of the department of physiology at the University of Chicago, who placed a forty-year-old man on a fourteen day water only fast. At the end of the

fast, the man's tissues were in the same physiological condition as those of a seventeen-year-old youth. That's twenty-three years younger in fourteen days.

Professor Child of the University of Chicago took a small group of flatworms which had grown old and fasted them for a couple of months, until they were reduced to minimum size and almost dead. Then he started feeding them again. And as they grew back to their normal size, they were just as young from a physiological standpoint as they were when they were originally born.

So professor Child concluded that partial starvation or fasting actually inhibits the aging process. The worms were actually brought back from an advanced age to the beginning of post-embryonic life. So in other words, what he said was that they were reborn. That shows the power of the body.

Now recently scientists at the University of Southern California, or USC, completed a study proving that fasting for as little as seventy-two hours flips a regenerative switch, which prompts stem cells to create brand new white blood cells, essentially regenerating the entire immune system, even in the elderly. Now think about that. How many times when somebody is sick and they run down and they have a fever or something is going on with them, and their immune is down, and the doctor gives them antibiotics or some toxic medication, which lowers their immune system even more.

If everyone knew that fasting on water only at the first sign of sickness or regardless, if you just need to boost your immune system, would create immune cells and regenerate the immune system in seventy-two hours with water-only fasting, think about how much money we would save, and think about how healthier people would be if they just did that.

So one of the biggest questions is, is fasting safe? Well, in 1973 there was a guy named Mr. A. B. He was twenty-seven years old. And he fasted for 382 days under the supervision of researchers from a Scotland University. Now this is the longest fast that's ever been recorded. The patient started out at a weight of 456 pounds. And when he finished the fast, he was at 180 pounds. So he lost 276 pounds during the fast.

Now Mr. A. B. consumed water. It wasn't water only. Most of the time it was water only. But he did take some vitamin supplements. He took a little bit of yeast for the first ten months. He took potassium supplements only from day 93 to day 162. And he only took sodium at the end, day 345 to day 355.

Now the researchers at the Scotland University concluded that this was

a successful, safe experiment. And Mr. A. B. was able to maintain his weight at 196 pounds for at least five years after ending his fast. So the fast literally restructured his whole body again. Because as you know, most people that go on these radical weight loss diets, they end up gaining back their weight and they end up gaining more weight.

Then one of Sweden's distinguished biochemists, Dr. Ragnar Berg, who was a Nobel prize winner and he was an authority on nutrition, came out and said that one can fast a long time, and that he knows of fasts of over a hundred days in duration. And he said we have no need of fearing that we will die of hunger.

Now that's another fear that's been created inside of us. Now I do recommend, and many practitioners do recommend, if you're going to do a long term water only fast, and that could be anything over let's say twelve days, that you really understand how to fast properly and how to break your fast properly.

A. J. Carlson, for example, he's a professor of physiology at the University of Chicago, stated that a healthy, well-nourished man can live from fifty to seventy-five days without food. But he also said that's provided he is not exposed to severe cold, avoids physical work, and maintains emotional calm, which is extremely important.

He studied and found that the maximum period of seventy-five days has been surpassed several times. So people have even gone longer than seventy-five days on water only fasting.

So what are some of the other health benefits that we have of water-only fasting? We know that it creates stem cells. We know that it's anti-aging. We know that hormone imbalances are often corrected in a fast. Commonly we see menstrual cycles restored after only two to three weeks of fasting. We know that infertile marriages have been able to conceive following a water fast. We know impotence has been corrected in males.

Dr. Thomas Seyfried argued in 2010 that if you did a water-only fasting once a year for seven to ten days, you would cut your risk of getting cancer by ninety-nine percent. Dr. Seyfried is a professor of biology right now at Boston College. Also, according to an animal study published in "Aging Research Reviews," intermittent or periodic fasting has shown to have a profound impact on counteracting disease processes and improving outcomes of a wide range of age-related disorders such as diabetes, cardiovascular disease, cancer, Alzheimer's, and even stroke.

But one of my favorite stories about fasting is from a Dr. Dimitri Karalis. When he did his first water fast in 1972, he had the most amazing experience one night. He woke up at midnight on the seventeenth day

of his water only fast, and he had this strong desire for running. But he sat there and he reasoned with himself for awhile. And he just tried to ignore this urge that he was having. He just wanted to go run.

But at the same time, he was thinking, well, maybe I should go back to sleep.

But this desire for running was so overpowering that he went running at 1 o'clock in the morning. After four hours of running, he lost all his gravity and he felt weightless, with a total lack of fatigue. So he felt this amazing energy.

And all of nature around him took on a wonderful hue and colors. And he felt so eager to greet every human being who passed him by. He felt this exceptional happiness. And his only wish at that moment was how to express and transmit this wonderful feeling he was having to others. He discovered at this moment that love and happiness is a product of perfect health, of a harmonious functioning body, mind, and soul. It was an amazing experience that he had.

Another very popular and famous doctor from the 1900s was Dr. Shelton. He wrote a book called *Fasting Can Save Your Life*, which I highly recommend you get if you have the opportunity. But Dr. Shelton treated more than forty-thousand patients.

And one of his cases that really stuck out was a metropolitan opera singer. This was a young soprano who had developed a serious asthma condition, and she couldn't sing anymore. So she went to the standard medical care, and her physician told her that there was absolutely no cure, and that even with medications her relief would only be temporary. She was devastated. As a result, she gave up singing, and she retired to her farm in New Jersey.

Then she heard about fasting and the concept of letting your own body heal itself. So she went on a supervised water fast. Within weeks her asthma cleared. And within months she was back at the Metropolitan Opera. Her career was saved.

A good friend of mine, Dr. Alan Goldhamer, did a study where he gave 179 hypertensive patients a chance to go through a water-only fast, to see if that would normalize their blood pressure, their high blood pressure. All of the patients in the study had high blood pressure. The treatment consisted of a two to three day pre-fast, and then patients were transferred to a medically supervised water-only fast for ten to eleven days, followed by a re-feeding period of six to seven days, consisting of a low fat and low sodium vegan food diet.

Nearly ninety percent of the patients were able to lower their blood pressure below the 140/90 level. Amazingly, the results seemed to be

permanent. All of the test subjects that had been on blood pressure medication before the water fast were able to discontinue the use of it.

Another expert in fasting, Dr. Fung, says that during fasting, unlike during calorie restriction, metabolism stabilizes or even goes up to maintain normal energy levels. Adrenalin and growth hormones increase to maintain energy and muscle mass. And blood sugar and insulin levels go down as the body changes from burning sugar to burning fat. All of this begins to address the long-term problem of insulin resistance and what some of the root causes are of the diseases most people suffer from today.

So how do you prepare for a water fast? If you're thinking about doing a water only fast, the first thing I would recommend is that you really do your research. And I always recommend people taking a week, taking two weeks, maybe even taking three weeks before they start a water only fast, to try to prepare their body.

So what I recommend is starting off with some oxygen colon cleansing. You know, the gut is the root cause of disease, but it's also the benefit of healing disease. So disease starts in the gut, but health also begins in the gut.

So the first thing that I would recommend and most practitioners recommend when you're talking or you're thinking about doing a water only fast is cleansing the intestines. Not only do colon cleansing, but cleanse the small intestine as well. And I've used the Nikola Tesla base formula for years, called Oxy-Powder.

So I recommend doing some oxygen intestinal cleansing and doing a liver and gallbladder cleanse. That's going to purge the liver. That's also going to clean the intestines. And it's going to prepare you before you start your water only fast, because sometimes if you don't prepare the body and you start going directly on water only, you may have some severe detoxification symptoms. You definitely want, if you're a diabetic or if you're on medications, you really want to do a medically supervised water only fast.

But these are some of the things. You can have severe headaches. You are getting off your coffee and you might have some symptoms if you don't take a couple of steps back before you take steps forward. And really pay attention at how you're going to perform the water only fasting.

Make your surroundings support your fast. Be in an environment that's conducive to rest. Rent a cabin somewhere in the woods. Be out in nature. Or even if you're doing it in your home, make sure you're not going to be stressed out and having to do work. I mean it's very

important that you take this time to focus on your body. Focus on your body's healing.

So your surroundings are very important. If you have negative people around you during your fast that are telling you, oh my gosh, you're going to die. You're not eating. Here's some food. You're doing water. I'm worried about you. You want to get rid of all of that negativity.

And then you want to breathe clean air. And you want to do a lot of deep breathing exercises. That helps open up your lungs. It helps you detoxify. It helps you calm down.

Now, what kind of water are you going to drink on your water only fast? I recommend drinking as much distilled water as possible. Although when I did my eighteen day water only fast, I drank distilled water. I drank bottled water in glass only. And I did have some sparkling water, only in glass bottles. So I used all three of those. But that's something that you can choose.

The next tip is to plan your daily activities. Make sure that you're going to wake up. It's a good time to learn how to do some meditation. That's only going to speed up the process. Do some relaxation exercises.

Make sure also that you try a week in advance or two weeks in advance or even a month in advance of you doing a water only fast to eat healthy. Change your diet up. Start eliminating meat, reducing meat in your diet as much as you possibly can. Try transitioning into a vegetarian or vegan-based diet before you start your fast.

Now how many days should you fast? That's a question that I'm asked pretty often. I always recommend fasting in multiples of three. It just seems to work the best, because we know seventy-two hours stimulates the production of stem cells and the immune system. So even if you want to start with a three day water fast, that would be a good accomplishment.

Then the next water fast that you could do, you could do a six day water fast, then a nine day water fast, then a twelve day water fast, then a fifteen day water fast, and then an eighteen day water fast. You could go to a water fasting clinic, medically supervised, and you could go longer than twenty-one days. You can go up to forty days. It just depends on what you need to do, what you need to accomplish, and what you need to heal within your system.

Now, one of the most important things, I would say the most important thing about water only fasting is how you get off or how you break the fast when you're done. This is extremely important. And this can be the most damaging thing that can happen to you. People have been

hospitalized by water only fasting for nine days, twelve days, fifteen days, and then when they're done they eat a big pizza or they eat hamburgers or they eat a bunch of french fries or they eat a bunch of bread in sandwiches.

It's very, very important. When your digestive tract has been stopped and not working for that long, you have to slowly introduce food back in so your digestive system can slowly start to operate again. So the best method to use, and the rule of thumb is half the time of your fast needs to be used for the re-feeding process.

For example, if you fast twelve days, then when your fast is finished on water, then you need six days to re-feed yourself. And that means starting with just a tiny amount of fruit, only juices, only vegetable broth, only live foods for the first two or three days, a little bit at a time, not overeating. Maybe a couple of bites of watermelon, a couple of bites of banana, a couple of bites of an apple, maybe a couple of sips of some fresh green juice. Very slowly get into the re-feeding process. Some people choose to finish their water fast and then maybe go into a ketogenic diet after their re-feeding process.

So people also ask me how many times can I fast during the year? Just remember that any water only fast twelve days or more, maybe even nine days--there's not a lot of research on it--but your body will continue to heal itself, and your body will continue to produce stem cells. And there's even research now that autophagy even happens with intermittent fasting. So some of the experts out there recommend that once you do a long-term fast, you should give your body six months or even eight months before you start on another long term fast.

Some of my other recommendations from the research that I've pulled together is that it is very beneficial for someone to do one six to eighteen day water only fast every single year. Intermittent fasting every single day or as many days as you can is extremely effective, because that takes a huge load off the digestive system. And that means you're skipping one, possibly two meals.

So a good intermittent fast is the eighteen/six. That means you fast from six p.m. at night until noon the following day. Now you can modify that however you want. But that's a really good intermittent fasting program to follow, if you would like to incorporate that into your daily life.

Okay, that covers the basics of water only fasting. I hope I've given you enough information so you can take this and go on your own and continue to do research. I do highly recommend that you always check with your natural health care practitioner before starting any type of nutrition program, supplement program, or water fasting program.

I'm Dr. Group from Global Healing Center. We have a lot of information about fasting on our site at GlobalHealingCenter.com. And check out my eighteen day water only fast on YouTube, which goes over all kinds of information, useful information, that you can use if you want to try water only fasting. Thank you and have a great day. And don't forget, live healthy.

Proper Preparation for an Extended Fast

Guest: Jeremy Hendon

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind: Fasting. I'm your host, Dr. David Jockers. And I'm excited about today's topic. It's about preparation for an extended fast.

In this summit, we've been talking about different intermittent fasting strategies. We've also been talking about extended fasts and water fasts, but we haven't gone into detail about how to prepare your mind and your body to get the best results out of an extended fast. And that is what my guest, Jeremy Hendon, is going to be talking about today.

Just a little bit about Jeremy, he grew up in Georgia, where I currently reside. In fact, he actually grew up right down the road in the same county as me. He studied at Emory, and UC Berkeley. He practiced law for a little while. And for much of his life, Jeremy was overweight and unable to consistently find a way to get healthy.

And that's what inspired him to cofound Louisa's Foods with his wife, two health magazines, the Keto Summit, which I was interviewed in, and now Cobionic.com. He's also coauthored multiple books, had his products featured on national TV, and has lived in 9 different countries over the last 5 years. Currently is in Portugal.

You're the only person, Jeremy, that I know living in Portugal. So if that makes you feel good about that. So welcome to the Fasting Transformation Summit.

Jeremy Hendon: I'm looking forward to it. I always enjoy talking with you. And I'm not surprised that I'm, especially your only interviewee from Portugal, much less the only person that you know.

Dr. David Jockers: Well it's cool, because if I ever go out there, if you're still there.

Jeremy Hendon: Yeah, come over. It's nice.

Dr. David Jockers: Alright. So we're talking about extended fasting. Really, how did you get started on your health journey? What inspired you to get into fasting?

Jeremy Hendon: Yeah, you mentioned a little bit of it. I was pretty much always fat as a kid. I don't remember when I was 2 or 3, but from the time I was in school at the very least, I was always overweight. And I've talked to so many people over the years. It's a lot of the same story.

When you're overweight from that age, especially, I'm 39 now. Which is not that old, but when you think back in the day, when I was in school in the 80s and 90s, there weren't that many fat kids. I mean, in some years, I was really the only fat kid. And I wasn't obese, but then again, there weren't that many obese kids at that time.

So being just 10, 15, 20 pounds overweight you're very different. I was very different from the other kids. So it affected me a lot. It's one of those things, did it have to affect me? Did it have to affect my psyche and I related myself? Maybe not in the abstract, but it did. And that's kind of what I latched onto.

So it was always really important for me. And realistically, even still today to some degree, that's what drives me. That's why I can kind of understand. And a lot of what we've started in terms of businesses and ways of helping people, we often focus on weight loss. I know so many people say we should be more focused on health rather than just weight loss.

And I agree with that sentiment, but at the same time, I also come from a position where I understand how powerful weight loss is as a motivator, and how powerful it is in terms of how you look at yourself and how do you relate to yourself.

So that's really driven me. And on top of that, my mom has been pre-diabetic for about 20 years with a bunch of other health issues. She has a pacemaker. She has a lot of different health issues. My father-in-law, my wife's father, has been diabetic for about 15 or 20 years. Although we actually got him on keto about 10 years ago, so he's off all of his medication, his resting blood sugar is in the 90s now. Not perfect, but

well below the pre-diabetic range. So a lot has gotten better for him.

But we've had a lot of these issues. So that's really driven a lot for me. And I say all of that backstory partially because that didn't all drive me directly toward fasting. I went low-fat first in college, because that's all I knew back in the day. That's what I was reading. And then I went low-carb when I found it around 2004. I went paleo around 2006-2007. Keto a little bit later. And I really didn't get into fasting until maybe 2 or 3 years ago. About 3 years ago is I think the first time I really started getting into fasting.

So it's kind of been a journey all along. I say all of that to lead up to the fact that fasting is something that my wife and I now use as a tool. On top of everything else. Because we don't view fasting as just a miracle. Fasting is not going to solve all of our problems if we're eating junk food when we're not fasting. Or if we're not exercising. Or we're not sleeping. But we do view it as an incredibly powerful tool to use in our life, to really supercharge a lot of the other things we're doing and to make a lot of other stuff easier.

Dr. David Jockers: Absolutely. And that's really what it is. It's a powerful healing tool that we've got in our tool bag. It doesn't cost us anything. We can pull it out at any time, or not. Depending on what's going on in our life.

So we're talking about extended fasting. Can you kind of go into that? Define that, and talk about what kind of time periods we're talking about to be considered an extended fast.

Jeremy Hendon: Absolutely. So, over the past few years, we've really seen fasting get a lot more popular. I don't know if your summit is the first on fasting, it probably is, because it's really just starting to hit its heyday. And I think most people, when they think of what they call intermittent fasting. Which is usually time-restricted fasting. So often you'll hear 16/8, right? People will fast for 16 hours and eat for 8.

And there have been a lot of studies on that. But actually the most studied types of fasting, and partially because of the people who got into it are either alternate day fasting or 5-2 fasting. And Mark Mattson, who is at the National Institute of Health and Johns Hopkins in DC, he's a big fan of 5-2 which is why that's been studied a lot. He's done a lot of studies on that.

Some other researchers are really big fans of alternate day fasting. And that's actually the most studied. And often that doesn't include fasting all in one day.

For me, when I think of an extended fast, partially because time-

restricted fasting has gotten so popular. That is fasting for just 14, 16, 18 hours, pretty much every day. I think of an extended fast as anything that's 24 hours or longer.

Now, I do longer ones, I think we're going to talk some about that. But realistically these days, I think for most anybody, if we're talking about fasting over a day, they're usually going to start thinking of that as an extended fast. So that's kind of how I think about it at this point, just in terms of how the words have come to play out.

Dr. David Jockers: Yep, absolutely. That's how I consider it, too. Anything within a 24-hour period is this time restricted feeding, otherwise called intermittent fasting. And as we go beyond that, for example, dinner on Saturday night, fasting until let's say lunch on Monday, that would be somewhat of an extended fast. What kind of risks do we have when it comes to an extended fast?

Jeremy Hendon: I'm glad we were chatting before this. We talked about asking this question, but I want to put out there that with any extended fast, first of all, I'm not a doctor. And even if I were, or even if you're talking to a doctor or listening to a doctor. Unless they're your personal doctor, they don't know your specific situation.

So it's really important to think about the risks. Because in general, for most people, an extended fast is not going to be a problem. However, that doesn't mean that you're not one of those specific cases. And it's hard to know without supervision.

For most people, 10 to 16-hour fasts, like intermittent fasting, they're probably going to be fine for almost everybody. If you sleep in for one day, you're probably fasting already for 10 to 12 hours, at least. However extended fasting, especially longer than a couple of days. If we're talking 5-7 days, you really, really should be very careful and do it under some sort of supervision. I'm going to talk about some of the specific risks very quickly, but again, it's not just to scare anybody. Because this rarely happens. None of this happened to me. None of this happened to anybody I know. But that doesn't mean it doesn't happen.

So, you've really got to be careful. Some of the biggest risks, particularly if you have any sort of preexisting heart issues. And even if you don't know you have preexisting heart issues. One of the things that fasting can do if you're not careful and you're not monitoring it, you can really get an electrolyte deficiency. Potassium deficiency is the most common. You can also get sodium, magnesium deficiencies.

And if that happens, and you have some sort of ischemic heart problems, then it can start degrading the muscle in your heart a little bit. And because you already have preexisting problems, it can actually

cause cardiac arrest or other serious problems.

So, again, I'm not saying this to really scare anybody, but really to warn people. It's the kind of thing you have to be careful with. Especially if you know that you've got that kind of preexisting condition. But even if you don't, you kind of really want to do these things under some sort of supervision.

Other risks, if you've got any sort of infection. You have less ability to fight those off as you fast longer. If you're not careful about it, dehydration. Also, if you're fasting for over 24 hours and you feel really bad at any point, or sick at any point, then you should really probably stop and figure out what that is.

And I'm not talking about the normal feeling bad. Because within the first 24 to 36 hours, there is some psychological, I don't want to call it pain. But there is some psychological discomfort, some hunger, things like that. I think we're going to talk about some of those things, too.

But like I said, the reason I think it's important to bring up. Because when you listen to anybody, not just me or you talking about extended fasting. You've really got to keep in mind that it is something that does come with risks. And there are a lot of things that come with risks. I mean, driving a car comes with risk. But, we sort of know most of those risks, and we're taking them into account, preparing for them as necessary.

Here, a lot of people don't realize that if you do this for 5 to 7 days, there could be risks that you just don't know about. So I think it's really important to make people aware of those and to encourage them to get some supervision in case they do it that long.

Dr. David Jockers: Absolutely. It's things people need to know about. Now, I think about an extended fast, particularly years ago if I thought about an extended fast, I would just think of pain. Like, why would somebody want to do that? Now that I've experienced it, I realize there is a struggle with it. Especially psychologically, more so than physically. But now I understand the benefits. Can you go into that, and why somebody would want to do something like this?

Jeremy Hendon: Actually, I like that you mention the pain first. So, I was talking to a friend, Dr. Simon Marshall. He's a psychologist down in Southern California. And he has this concept, mostly for athletes because he helps train athletes of certain types. And he calls it embracing the suck. And I actually think that's one of the benefits of doing an extended fast. It's actually a lot of the reason that I do it from time to time. In fact, I just did a 3-day fast. I just ate last night for the first time in 72 hours. And I haven't eaten today. I've eaten one meal in the

past four days.

But part of the reason I do it, my friend Chris Kelly. I think you know Chris Kelly, he says realistically, the biggest detriment of our modern life is comfort. And he means that we have so many comfort foods that are easy to eat and hyperpalatable. We have so much comfort in lights being able to keep us up at night, and not sleep well.

But also, there's this psychological comfort that, I'm as much a fan of comfort as any human. And I love it. But at the same time, one of the benefits of fasting is pushing yourself a little bit into that discomfort zone. Where it is uncomfortable, and even a little bit painful at first if you haven't done it before.

And I say painful not to mean physical pain. You're not feeling physical trauma to my body or aches or anything. But at the same time, it's this psychological friction that you push through. And I find it makes everything else in life a little more put into perspective, if that's the right word.

Because, ok. I went for three or four days without eating. Or five, or seven, whatever it is. It was uncomfortable, but I didn't die. I didn't give in. Then maybe when my wife or husband walks in and criticizes me, it's not a big deal. Or something like that, when my boss gives me a hard time.

I mention that, because I actually find that to be a really big benefit, just for myself. I don't know if that makes sense to you. We can go to other benefits, obviously.

Dr. David Jockers: I love that. Just that idea, embrace the suck.

Ultimately, all of us love comfort. We naturally, by default, are going to drift towards that. In today's culture, we have to be intentional about creating discomfort. Whether it's exercise. Our ancestors didn't really think about that. Today we've got to kind of plan out our workouts.

We've got to be disciplined in order to follow through with that. It's kind of the same thing here with fasting. There are things like cold water immersion. Saunas. We've got to be intentional and create environments for all these things to get us uncomfortable. Because comforts are just so built into our society. So I love that concept of embracing the suck. I think just mentally understanding that. Like, hey, this is going to suck. I'm going to embrace that. I'm going to thrive in that, rather than try to run away from it or pretend it's not there.

Jeremy Hendon: Absolutely. And other than that, obviously there are a lot of physical benefits. I actually don't know who else is speaking with you, but I'm sure most of them are going to talk about a ton of the benefits of fasting. And even the benefits of intermittent fasting, they're

mostly the same as extended fasting. There may be a few additional ones you get from extended fasting.

But the biggest difference is that you get this, the psychological component. Which you really don't get with intermittent fasting. Because you know, fasting for 16 hours, really not that hard. After you do it for a couple of days, it's never an issue. Because you just wake up and you just don't eat for 5 or 6 hours. It's kind of normal.

So you get that. But then, most of the other benefits get amplified. For instance, a lot of the benefits that we know from fasting. Not all, but a lot, actually come from ketosis. And you're a big fan of keto diets and ketosis. Particularly a lot of the neurological effects that come from fasting. Those are likely linked to the work of Mark Mattson, and Valter Longo, and other people to ketone bodies.

Realistically, fasting for 16 hours, you get a little bit into ketosis, maybe. But definitely fasting for three days or more. Seven days. You're deep in ketosis by then, because you're not taking in anything. So that's a big thing.

In fact, sometimes if we want to go keto, because we don't stay keto all the time. We stay paleo all the time. That is, we eat real, whole foods all the time. But we go into keto maybe a few months a year, when we feel like it's necessary. We just want to cut back on carbs. So if you want to get into ketosis, fasting is a great way.

Also, more weight loss. I know not everybody is doing it for weight loss, but I'm sure a lot of your listeners are still interested in weight loss. And what they've found, actually back in 1964, the journal of the American Medical Association published this study. I'm not sure they could get away with this anymore. They published a study where they "starved" subjects between 12 and 117 days. And they talked about the risks, like heart problems, potassium deficiency. They were under supervision, so they were making sure nothing bad happened.

But the weight loss benefits were great and continued. And when other people studied this, they actually find that your metabolism speeds up over the first three or four days. They find that maybe around 5 to 7 days, it might start slowing down a little bit again. But particularly over that 3, 4, 5-day period, it speeds up. And they think it's actually driven by an increase in norepinephrine and certain other neurochemicals.

And, we don't really know why, but we think the evolutionary reason why that happens is because if you were starving for three or four days, back in the day, then you probably didn't want to be tired and have your metabolism slow down. You probably wanted some energy to go find some food to go on.

So that happens, so weight loss. You can lose more weight doing it this way. In fact, back in December 2015 I kind of did an experiment. I spent 11 weeks trying to lose weight, because I had put on weight a couple of years before that. And I did DEXA scans before, halfway through, and after. And I effectively did a 5-2, I was also on my 5 days of eating. I was measuring, I was keto, I was eating one carb-up meal on Friday nights, but that was also measured. So I was very careful. It wasn't just the fasting.

But actually it worked really well. I lost 15 pounds total in 11 weeks. And 12.5 of that was fat. And I've got the DEXA scans to actually measure it. So it wasn't just me trying to figure it out. And like I said, it wasn't just the fasting. But the fasting for me is one of the things that has actually worked best for weight loss at certain times in my life.

So you've got that. And some of the bigger benefits, autophagy. Autophagy is cellular cleanup, is the generic word for it. Programmed cell death. And that sounds bad, but your cells are supposed to die when they're supposed to die. When your cells age, they're supposed to die and you recycle all those materials.

Autophagy sometimes gets stuck when we have certain metabolic problems. Like metabolic syndrome. And autophagy is actually triggered mostly by nutrient deficiency, particularly protein deficiency. And these days, we don't actually get very much protein deficiency, most of us eat plenty of protein all the time. Particularly if we're eating a paleo/keto diet. We're eating plenty of meat and seafood.

So, fasting can really boost that autophagy. It's caused by increased glucagon and decreased insulin. And Dr. Valter Longo out at USC and Dr. Tom Seyfried. Do you have Tom on the summit? I'm not sure?

Dr. David Jockers: I don't. But he was on my Keto Edge Summit.

Jeremy Hendon: Yeah. Tom Seyfried talks a lot about this. Because his main research is in cancer. So he's not just talking about autophagy. But he's actually talking about particularly neurological cancer. Certain cancers of the brain. He's found fasting to really help chemotherapy.

And Dr. Valter Longo, who is an Italian scientist at USC. He actually has done some studies on this, too, and found that chemo patients really do better a lot of times when they're fasting, or at least fasting periodically. So you've got all of that. Tom Seyfried also talks about long-term you're killing precancer cells. There's just a lot of other stuff.

Actually, Jeff Fuhrman, he did a really interesting study not too long ago on autoimmune conditions. I don't know the mechanism for this, but it was more of a case report. He looked at 6 people. But all six of them

were doing supervised water-only fasting. And all of their autoimmune conditions went into remission.

Now, maybe if they had been doing the AIP diet and cutting down anything that triggers it, it would have been the same. Maybe it's just like the elimination of problems. Which is my best guess. But at the same time, it's interesting to look into why, or if fasting might actually work better for that.

Dr. David Jockers: One thing we know is that ketones, elevated ketones and fasting obviously is even more anti-inflammatory than just being in a state of nutritional ketosis. Downregulates the inflammasome. So the genetic pathways that amplify inflammation throughout the body. So you quiet that down, obviously some sort of chronic inflammation condition or autoimmune condition, you're going to get the best results that literally put it in remission.

Jeremy Hendon: Absolutely. And definitely with extended fasting, you're going to get more of that, right? Because you're going to get more ketones body. You're going to get more of the nutrient deficiency for the autophagy. So it's going to clean up all of that. I don't know about all of it, that maybe going a little far. But it's going to probably help a lot more.

Dr. David Jockers: Yes.

Jeremy Hendon: Anyway, that was a long spiel on why I do it, and why I think other people are looking into it more and more. Particularly extended fasts. Because why you can get a lot of the benefits from intermittent fasting. And I'm a fan of intermittent fasting, too. So I'm not downplaying intermittent fasting. But you actually can get a whole lot of benefit, additional and kind of supercharged from extended fasting.

Dr. David Jockers: Absolutely. How does somebody prepare? How do they prepare their body for an extended fast?

Jeremy Hendon: Yeah, absolutely. There's one caveat, see a health professional if you're going to do it. Hopefully get some supervision. And then, I think a lot of the preparation, I'm going to start with the mental side. Because I think there's both the mental and the physical. The mental side is be prepared to have it hurt a little bit.

I keep using pain and hurt, probably not the best words. Be prepared for the discomfort. In fact, kind of amp yourself up. Say, ok, this is going to be uncomfortable for two days. And it's really only the first two days. If you're going to do it longer, you'll find that third, fourth, fifth days, they're not that bad. But the first two days, be prepared and kind of get yourself ready for that.

And then, especially for those first two days, plan to do very, very little. You've really got to schedule this out. Because if you haven't done it before, particularly if you haven't been eating a good diet up until this point, it is going to be annoying. Your brain is not going to work well. You're going to feel tired. You're going to feel the brain fog. Your body, you're just going to feel like you can't do very much. You can't focus. It's better and worse for some people, depending on how metabolically flexible they are. Depending on how easily their body switches to burning fat.

But if you're in that situation, you've really got to plan not to do that much. I wouldn't plan to be doing any creative work, too much thinking. Not even that much social activity, because you'll find that even social activity, it can be good in some ways because it's a little bit distracting.

Tim Ferris actually talks about this, and he actually suggests that people schedule calls and walks. So they try to walk for three to four hours those days. Which I actually like, too, because I still like getting in that sort of mild/moderate exercise.

Whatever you do, just try to plan to make sure that you're not doing anything that's demanding on your mind. And then, the same actually goes for your body. So you really don't want to be doing any high intensity exercises on those days. You probably won't feel like it, anyway, when you do that. But you're not going to have the energy for it.

Also, if you're doing something really intense where you're breaking down a lot of muscle, it's just not great because you don't have anything to build it back up with. Especially if you're not metabolically flexible. Your body is going to start breaking down more of the protein than the fat. So it's not a great idea.

A few other things that I would say to get ready, because that's a lot of what we're talking about. One is eat better for at least a week before. At the very least, eat paleo, if not keto. And I use those as broad, generic terms. But all I mean is, at the very least, be eating real foods. Meat, seafood, vegetables, fruits. And if you can, eat keto. Cut out even the fruits and the sweet potatoes and potatoes and things.

Because it will make it a whole lot easier to kind of ease into that, than just if you're eating a McDonald's French fries every day, or whatever, pizza. Then you're going to go in that fast, and it's going to feel terrible. And maybe you want even more discomfort. If you want more discomfort, then sure. Do it that way. I don't think it's the healthy way to do it. But yeah, I would say ease into it.

Other ways to ease into it, exogenous ketones can really help. This actually, people ask about exogenous ketones for weight loss and

things. I think they can help some people in some ways. I think they can make people feel more full. But in general, I actually think it's one of the best uses for them is if you're going into a fast and you haven't done it before and you're finding it really hard, that first day or two, you can take exogenous ketones a couple of times.

They're not going to affect your fast at all, because they're bioidentical to the ketone bodies that your body is producing. All they're going to do, first of all they're going to give you sodium. We're taking ketone salts, even if you could find them and want to take them. Take the ketone salts, partially because you want the potassium and magnesium and sodium. You're not getting that otherwise, and electrolyte balance is a big issue when it comes to fasting.

But also the ketones, because your body is not good at producing them, that's part of what makes it painful at first. Particularly the brain fog and tiredness. If you take some of these things, it won't really affect your fast but it will make you feel a lot better.

So, those things. And just other basic things. Drinking plenty of water. Getting some electrolytes if you think you're imbalanced. A lot of people, when they go keto, it's one of the first ways they feel, it's what they call keto flu. And often the biggest cause of that is sodium potassium imbalance, something like that. Magnesium. So just taking some of those electrolytes can help maybe a couple of days before, or when you're first starting.

I think those are my biggest tips for getting prepared. Both on the mental and physical side. You've just got to be ready for it. And I mean that both making surgery you're ready from a psychological stand point, but making sure that you haven't just been treating your body like crap and then you decide one day, ok, I'm going to fast because I've been eating junk food for the past year.

Well, you can do it. I'm not necessarily discouraging it. But at the same time, it's going to be hard. You're going to really feel it.

Dr. David Jockers: Absolutely. I compare it to exercise. It's like, if you are sedentary and you're like, you know what, I'm going to go run this 5K. And you're trying to run it as hard as you can, you're going to feel like you got run over by a truck the next day. You're going to be so exhausted.

It's kind of the same thing here. However, if you start getting your body fat adapted. You start going, moving towards a ketogenic style diet, intermittent fasting. If you start doing that, then you bridge it into an extended fast, it's a lot more comfortable.

Jeremy Hendon: And it's a good analogy, because I haven't been running. I might not even be able to run a 5K right now. In fact, I'm pretty sure I couldn't. And it's the same with a fast, if you're not prepared, you might get halfway through the first day. Or maybe even through the whole first day. You're not going to be able to have the willpower to resist at some point, because you're going to feel bad enough. So it's a really good analogy, just to make sure you can even keep doing it rather than just not making you feel bad.

Dr. David Jockers: Yeah. I say start slow and low. If you are not used to fasting, you start with a 12-hour overnight fast. Next week, maybe a 14-hour, the next week at 16, next week at 18. You kind of work it up that way. By the time you get to hours, where you're able to do one meal a day. Like you were doing 5-2, that's sort of a strategy. Then kind of bridging that into 3, 5, 7-day fasts. It's not as hard, because your body is already good at burning fat for fuel. So you want to kind of stair-step it that way.

Jeremy Hendon: I can attest to both sides. In fact, this fast I just did for three days, I had not been eating as well as I would like the couple of weeks before that. And man, the second day felt really, really tough. There are other times, because I try to do at least a 3 or 5-day fast two or three times a year. I'd like to do it more often, I don't always get around to it. But there are other times it's felt much easier. This time, I was like, wow, I've really been eating bad. I'm really not fat adapted right now.

Dr. David Jockers: You know, yeah.

Jeremy Hendon: For me, it actually pushed me. My wife, who was also doing it with me, she's like, maybe we should just eat tonight because we feel so bad. I'm like, no, because I feel so bad, means I actually need to push through it. It's just my personality.

Dr. David Jockers: Yeah, you were embracing the suck.

Jeremy Hendon: Exactly. I try to. I try to listen.

Dr. David Jockers: And you just brought up the fact that you were doing it with your wife. So I think that's a really important point, too. If you're doing it with somebody or a group, it's just so much easier. It's so much better. You've got that built in accountability, and somebody you can embrace the suck with.

Jeremy Hendon: Yeah. And fasting is very, very traditional. In fact, extended
fasts, we still think about Ramadan. But there are a lot of other fasts throughout history. Almost every religion had some history of fasting and some tradition of fasting. And it's been written about.

Actually Upton Sinclair, the author of *The Jungle*, actually wrote a small pamphlet about fasting back in 1911. I don't know if you've had a chance to read that.

Dr. David Jockers: I haven't, no.

Jeremy Hendon: It's really fascinating. Because he's talking about how great it is for your health and your mindset and everything. This was 107 years ago. You can actually find that PDF online for free if you just look up Upton Sinclair fasting.

Dr. David Jockers: I'll have to check that out. Well I know Plato, the philosopher, he said he fasts for greater mental and physical efficiency.

Jeremy Hendon: Yeah.

Dr. David Jockers: So he just noticed mentally how much better he felt. Obviously he's a philosopher. And also experienced it physically, just like we've been talking about.

Jeremy Hendon: Yeah. That's something you get by about the third day. Not always the first or second day.

Dr. David Jockers: Yeah, absolutely. However, if you're practicing intermittent fasting, like I do, it's like, I just feel so much better. I feel so much more mentally clear. If I were to eat three meals in a day, I just don't feel as good. As opposed to one or two meals. I feel so much more mentally clear. So much more sharp.

Jeremy Hendon: We feel the exact same. Sometimes we'll go on vacation somewhere, and we'll start having three meals. We'll go somewhere delicious like the piedmont Italy, or Japan or somewhere. We'll have three meals, probably not even spaced that far apart because we eat too much. But you notice, not only notice you feel more tired but like you said, the mental clarity. Everything about your mind just doesn't work quite as well.

Also, this is a thing. I know some people talk about, but I don't feel like it gets enough, people don't pay enough attention to it, and that is your mood. I find this a lot for myself, but for other people, too. It's not just clarity or focus, but it's actually your outlook. My outlook changes a lot if I am, first of all, if I'm just eating well. But then if I'm fasting after a couple of days, my outlook starts to clear up like I'm just much more optimistic about things. I don't take things as bad.

When something "bad" happens, I kind of shrug it off more easily. And that's a big deal. I don't think a lot of people realize that food alone can do this sort of thing, let alone something like fasting can really

change your reaction to these things. It's not just a free-will choice. It's realistically much harder to react positively when you're eating all the time, especially when you're eating junk all the time. So that's another benefit of fasting that probably doesn't get enough talk.

Dr. David Jockers: So true. When you're activating the neuro inflammasome, this gene pathway that amplifies inflammation in the brain, if that's activated you're typically going to feel depressed. You might have anxiety. You might be more irritable. Everybody is a little bit different. For some people, in general, they're positive people. They're oftentimes high performers, but they're very irritable. Little things irritate them. Other people, they end up with more so depression. Other people they're very anxious. Constantly anxious, constantly on edge. And it's all related to that neuro inflammasome. So to kind of reset that, we get to notice big changes in our mood.

Jeremy Hendon: Absolutely.

Dr. David Jockers: Let's talk about on a fast, can we eat anything? Does it have to just be water? Can we do coffee? Can we do tea? What are your thoughts on that?

Jeremy Hendon: Yeah, so the first thing I'd say is you kind of have camps on this, right? You have the people who are super hardcore who say you shouldn't do anything but water. And you definitely should be doing water, by the way. Above all, you've got to be hydrating. You can live for weeks and weeks, there was a guy in Scotland back in the mid-twentieth century that went 382 days, I think. He lost 275 pounds. So you can fast for a long time, but you can't go without water for more than a few days.

Dr. David Jockers: Yeah, if you're going to do a dry fast, definitely no more than 3 days. And you should be really good at water fasting first.

Jeremy Hendon: Yeah. And even more supervision for that. I don't play around with that stuff. No water is a problem very quickly. It causes all sorts of problems.

So you've got your hardcore camp, and then you've got your camp where you can do a lot more and want to be more realistic about it. I don't think it's an either or. And the reason I even bring up the camps is because in my mind, if you're going to do it. Let's say you're going to start with a 3-day fast. I actually think you should start from sort of a hardcore perspective.

And the reason is, because a lot of people when they don't start from that perspective, it's just very easy to slip other things in. It's very easy to say, well, I'm already drinking my coffee, this little tablespoon of cream

or milk won't hurt. Or this tiny bit of sugar.

Or let's say you're taking some branch chain amino acids, which can actually be good on a fast in a lot of ways. But let's say you're taking those, then if you're not hardcore about it, you might say, well, I could just have a protein shake with some water. And you put some whey protein in there. It's just very easy to do that if you're...

In fact, when people are starting pretty much any diet. Like a keto diet or a paleo diet. I just encourage them to be really strict at first. Because I feel like it's better to start from that perspective. And then figure out what works for you and what doesn't. Because you can tell more about how you feel and what's actually making a difference. So fasting, I actually think it's the same. So that's the main way I approach this.

Now, in the end, are some things ok? Sure. Tea, really not a problem. The one thing I'll say about tea is, if you're drinking it, pretty much any tea but particularly black or green. Red is a little different, since red is not really a tea. But if you're drinking those teas, and you brew them very much at all. And you haven't eaten anything for a day or two, they will actually make you feel pretty bad. Because they'll be over brewed. They're very astringent, I forget what it is in tea. I don't know my teas that well. Louise drinks a lot more tea.

But I've had this happen to me when I haven't eaten anything. Because I don't know my teas very well, I just leave the tea bag in for 5 minutes too long, because I'm not thinking about it. And I'll drink the tea, and it will make me feel really bad. So you've just got to be really careful with that.

But teas in general are fine, as long as you're not putting anything else in them. A lot of people still drink coffee. You'll find that you need it less and less, so long as it's black. A lot of people drink bone broth. Bone broth can actually be very good, because it's only really fat and water plus some nutrients, and it actually has some good nutrients in it. A lot of your electrolytes, a lot of your potassium and collagen. Collagen is not an electrolyte. But a lot of potassium, magnesium, and other good things like collagen and fats. And you're not getting very much of the protein in there because the bone broth just doesn't have that much protein.

So I would say, yeah. A lot of those things are fine. I would encourage people to start out with the water, and then move a little more lax as they go along. But generally tea, coffee, bone broth, those things can be fine.

The biggest problem is actually protein. So people will notice carbs more, but protein, autophagy, a lot of the other things that happen in ketosis, but in fasting as well, are actually caused by a lack of protein. So

it is the lack of protein that's one of the biggest triggers of the benefits in a fast, particularly an extended fast. So you really do have to be careful with your protein.

That said, a number of people will take, say, 4 to 6 grams once or twice a day of branch chain amino acids to make sure they don't lose any muscle. And I haven't seen any clinical research on that, but there are lots of anecdotes of people testing both without that during a fast and then with it, and it seems to work pretty well. So I've done that sometimes, and haven't noticed a difference. But I'm very careful about it. In general, I'll only be drinking water and then I'll take branch chain amino acids once or twice a day.

But it's because I started really strict. I don't feel like it makes any difference for me, I could be wrong. It actually might be making differences I'm not noticing. But it doesn't seem to. And it actually is a fair small amount I'm talking about, 4 grams at a time once or twice a day.

So that's a general answer. I suggest people start strict, but if you are going to do it, stick mostly to bone broth, tea, coffee. Pretty much with nothing else added in them.

Dr. David Jockers: I totally agree with that. What about when you're done with the fast? What should you do, if you do an extended fast? 3, 5, 7-day fast. How do you break that fast?

Jeremy Hendon: I actually like to hear your opinion on this. I don't think there's a hard and fast answer to this. There are actually some dangers if you have gotten, this is another reason to have some sort of supervision. At the very least to know really well what you're doing.

Because if you do it for a long time, and you're nutrient deficient, particularly if you're deficient in phosphorous or some of your electrolytes, then you can actually get what's called refeeding syndrome. Which is where when you start eating again it triggers insulin receptors on your cells and all the phosphorous and all the electrolytes in your blood quickly get transferred into your cells and then you get really low phosphorous and electrolyte levels in your blood.

And that's actually pretty dangerous. Again, not to scare anybody, but it's another reason just to be careful about this and to think about this. Otherwise, I just say be smart. We mentioned this at the beginning. And I know you completely agree with this. But fasting is not a miracle in and of itself. It's not a solution to every problem. It's not going to fix all of your health issues for all of your life.

So if you go back to eating junk food as soon as you stop fasting, or you

start stuffing yourself with hyperpalatable foods that are full of fats and sugars combined altogether, then you're going to get the same junk results that you got before. And it's not that it's going to ruin everything that happened with your fast. You still probably got some benefits out of it.

But, don't view the fast, I think it's more of a psychological point for me. You don't want to view, let's say you're doing an extended fast for four days. You want to view that four days as your healthy period that allows you to just go and eat junk. You want to view it as part of a whole. Seeing that that four days added some extra benefits, made everything easier and better for you.

And then when you go back, it's not that you have to be perfect but you still want to be doing things that are generally good for you. Eating nutrient dense foods. Not stuffing yourself. All these sorts of things that we talk about outside of fasting. Because you know it will make you feel better. And also just won't create this mindset where you're like, oh, I deprived myself for four days so now I can just go and stuff myself full of Pizza Hut or whatever it is. So that's my view on it.

Dr. David Jockers: Yeah, absolutely. I would say that basically after a 3 day fast, three days or longer, your parasympathetic nervous system. Basically your body's ability to increase digestive juices, is going to be reduced at first. So I typically recommend doing more liquid based foods. Foods that are easier like maybe a protein shake, or fermented vegetables. Great time to reinoculate your gut. So sauerkraut or kimchi or some coconut water kefir. Something along those lines. Really good things to put in. Bone broth is really good, especially if you did a water fast. Or a soup or a stew.

I think it's, you want food that's really easy on the gut. That easy for your body to digest. And ideally take digestive enzymes with that meal, as well. And usually, I say for every three days of fasting, you want at least one day of recovery foods. So before you eat the steak, in a sense. If you do a 3-day fast, you should not do that day one breaking the fast. If you do a 6-day fast, you would give yourself 2 days before you eat the steak. That's typically what you want. Before you have harder to digest meat.

Maybe if it's in a soup and it's really well cooked, chicken soup and it just kind of flakes off the fork. You might be ok with that. But in general, you're going to need more digestive juices to break down that meat. So it's better to kind of extend it and get your digestive juices flowing well again.

Also, you could do things like apple cider vinegar before your meal. Ginger tea, stuff like that to help stimulate that. But yeah, there has been cases where people have gone out and they want the big steak

because they just did this 4 day fast. And then they're throwing up later in the day. They feel awful.

Jeremy Hendon: It's good you mention that. We actually thought about getting a steak last night, but we didn't.

Dr. David Jockers: You'll think about it, for sure. You're like, I want to break my fast with this. But, your stomach is a little bit behind. So you've got to give it a bit of a crutch there.

Jeremy Hendon: We had some sautéed veggies and some other stuff.

Dr. David Jockers: Exactly. That's exactly what you want to do.

Jeremy Hendon: I do love some good kimchi though.

Dr. David Jockers: Oh yeah, absolutely. Me too. I don't like the spicy, I do the mild kimchi.

Jeremy Hendon: I had a lot of Korean friends when I lived in New York, so we ate a lot of kimchi. And I like the spicy.

Dr. David Jockers: There you go. Perfect. Jeremy, this has been a great interview. Any last words of inspiration? Also let people know where they could find out more about you.

Jeremy Hendon: Yeah, so I think you're going to put a link to our new company, Cobiotic. Which is actually a gut health company. We actually sell prebiotics through there. But also just me, JeremyHendon.com. If someone wants anything about me, or anything, they could follow me there and find anything else I do. It's probably the easiest place.

Dr. David Jockers: Awesome. Jeremy, thanks so much for being on. I just want to commend you for giving a great interview here, and being a leader in the health space and really sharing this information. Thanks so much.

For you the listener, I want to remind you that fasting, just like we were talking about in this interview, can truly unlock the dormant healing potential within you. It is safe, it's powerful, and it just might transform your life. So give it a shot. And we'll see you on a future interview. Be blessed, everybody.

Detoxification Support During a Fast

Guest: Michael Murray

Dr. Jockers: Well, welcome, everybody, to the Fasting Transformation Summit, where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind, fasting. I'm your host, Dr. David Jockers. And I know you've been hearing about fasting. It's literally all over the internet. And in this summit we are bringing you the truth, the scientific evidence, and really practical strategies on how to fast to improve your health. And today's topic is detoxification support during a fast.

And I brought on one of the leading voices in natural health, and mentor of me, Dr. Michael Murray. And he's called the voice of natural medicine, and he truly is. He has published over thirty books, including a book I have right here that I reference often, called *The Encyclopedia of Healing Foods*. He has been featured literally all over the media. He's also a faculty member of Bastyr University and the chief science officer of Enzymedica, which is a great supplement company.

For the past thirty-five years Dr. Murray has compiled a massive database of original scientific studies from the medical literature. Personally he has collected over sixty-five thousand articles, which provide strong evidence on the effectiveness of diet, vitamins, minerals, herbs, and other natural measures kind of like fasting in the maintenance of health and the treatment of disease. And you can find him at drmurray.com. And so, Dr. Michael Murray, thank you for joining us here at the Fasting Transformation Summit.

Dr. Murray: Thanks David. I love the name of your summit.

Transformation is always a great thing. And fasting can be a powerful vehicle to make that happen.

Dr. Jockers: Yea, absolutely. And so how did you get going? I mean obviously you've got this passion for research. How did you get started in the natural health world and become the voice of natural medicine?

Dr. Murray: Well, there's an inner story and kind of the outer story I tell everyone. And I'll do a little bit of mix of both. My father developed a condition called Bell's palsy. It's condition where you lose the enervation to the muscles of the face. And his face was literally paralyzed. And he went and saw a naturopathic doctor, and it literally brought his face back to life.

And I had a knee operation a couple of years prior and just wasn't really responding to physical therapy. And he suggested I see this naturopath. And I did, and it was just a miracle in my life. And that just stimulated me to want to learn more.

And the more I learned about diet, herbs, and natural approaches to health and healing, it just resonated with something deep inside of me. And this became my mission. And I feel really blessed. And I gained so much personally from the path that I was led to. And hopefully I've made a difference in the world on my own path.

Dr. Jockers: Yea, absolutely. Well you certainly have. And I really want to acknowledge you for just paving the course for younger people like me to come up and have all these great references and be able to really share this message with more and more people throughout the world. And you've seen literally over the last twenty years just huge growth in natural health and natural wellness. And so a lot of the work you've done has helped pioneer that. So thank you for that.

Dr. Murray: Well, thank you. And this is such an important topic. I just want to stress to all the viewers out there, I really believe that the greatest threat to human health today is not some super virus or even eating too much sugar or junk food. The biggest threat to human health is the ever increasing environmental toxin load. And we are the top of the food chain. And so we have the ability to increase as we age the concentration of these toxins in our body. We are bio-accumulators of these toxic compounds.

And it's really, really important these days to do everything we can to avoid and then support our body's ability to get rid of these toxic compounds. So I really welcome the opportunity to talk about this really important subject.

Dr. Jockers: You're so right about that. We need detoxification

strategies. And that's your topic today. And so what kind of results and like what strategies do you like to use for detoxification and fasting?

Dr. Murray: Well I think that detoxification is really kind of a complex series of events in our body. And we require an unbroken chain of these events to effectively get rid of toxic compounds. And one of the great basic tenets of naturopathic medicine is to remove obstacle to cure. And obviously these toxins can be an obstacle.

But so, too, can our inability to get rid of these toxins. And there are a lot of things that go into getting rid of these toxic substances. And we have to support our body properly day in and day out, but I think especially during a fast.

Dr. Jockers: Yea, absolutely. And what sort of toxins are the big ones that we are trying to eliminate from our body?

Dr. Murray: Well, you know, thousands of years ago when they were doing fasting for healing, they were mainly concerned with water soluble metabolic toxins, the toxins that our body naturally produces. And I think water fasting was really a great way to kind of flush all these compounds out.

These days, the toxins that we're most concerned about are fat soluble toxins, pesticides, herbicides, flame-retardants, solvents, heavy metals. And these compounds are stickier and harder for our body to get rid of. And we have to use, I think, different types of strategies along with making sure that we're well hydrated to get rid of these toxins.

So I think that there's a lot that we can do to assist the body to get rid of what are called persistent organic pollutants. And those are the compounds that are part of those that I mentioned, pesticides, herbicides, flame-retardants. These are the compounds that when people think of toxins these days, that's really what they're thinking of, and for good reason. These are really harmful compounds to our health.

Dr. Jockers: Yea, absolutely. And like you said, we store them in those fat cells. And so when we start to fast, our body starts to break down those fat cells to use for energy. And so, therefore, those toxins can start to get out into the bloodstream. And so, let's talk about some things that you like to utilize, like vegetable broths and juices, and really how to prepare those, as well as the benefits of that and how that can help reduce the toxic load in the system.

Dr. Murray: Well thank you. I think that even before going on a fast, we have to kind of prepare ourselves for it. There's an old saying, any fool can fast, but only a wise man knows how begin and end one. And so I think there has to be kind of an easing of our system into it. So I like to

recommend a really clean diet prior to any form of fasting.

And I know that the audience is going to be a spectrum of people, people that are capable of enduring and doing well on a water fast or a juice fast. But then there are also people that are probably just getting started and they really need, I think, to be a bit more careful, especially if they're carrying a lot of excess body fat. Because as you said, these toxins get stored in our fat cells, and as we start reducing our calorie intake, our body starts releasing those compounds.

So we want to ingest things that can help our body get rid of those toxic compounds. And food can be very helpful in doing that, good clean food with a focus on high fiber, high water content vegetables. And you mentioned vegetable broths. These are great ways to kind of prepare our body to deal with a fast.

And there's no real wrong way to ingest vegetable broth. I do like the garlic and the onions and high sulfur content vegetables, cabbage and kale and those sorts of things, to kind of get our body ready to get rid of these toxic compounds, and continue to utilize vegetable broths during a fast, within moderation. We want to keep calorie content low, and we want to make sure we're breaking down those fat cells.

But we also want to make sure that we're giving our body the proper support. And a potato based vegetable broth is okay as well. It's going to provide some starch and some sustenance. But it's also going to provide some electrolytes, potassium and what not. So that helps as well.

I'm a big fan of juicing. I've written a whole book on juicing. And it's been a part of my lifestyle for the last forty years. And I just think it's a fantastic way to kind of flood your body with these important phytochemicals that can help detoxify our body.

I like to kind of pump up my food and my juices. I tell people to spice it up. When we're talking about juicing, I like throwing in fresh ginger, fresh turmeric root. I like throwing in parsley, basil, mints. These are powerful concentrated sources of detoxifying agents. I go a little bit extreme at times. But I think that's what happens when you follow a kind of a path for forty years.

You got to mix it up, and you find things that are really refreshing. I mentioned mint. I think mints are just part of God's gift to the earth. They're fantastic medicines. And I think they're very effective in nourishing and supporting our digestive system. So I like to use the mints quite a bit. And you can do that in the vegetable broths, as well as in the juices.

Dr. Jockers: Yea, absolutely. And let's talk a little bit more about the

juices. And so there are certain vegetables that provide a lot of juice. I think about like cucumbers or something like that. There are other ones that provide a lot of chlorophyll. And there are other ones that basically are more like the bitter herbs. You know, I always tell people bitter is good for your liver. And so how do you like to set up your juices using those three categories?

Dr. Murray: Yea. I kind of let people run amuck, I guess. The biggest thing is to enjoy what you're doing. And so I have some of my favorites. And I encourage people to experiment. They might find something that they really, really like.

For example, I had this one drink I called "Better Red than Dead." I discovered this drink many years ago. Yams were plentiful. I had never juiced yams. You think what would that taste like, yams, sweet potatoes? When you juice them, they do yield a lot of juice, and it actually tastes great. And then you throw in beets and radishes and other things in there, and you can really spice it up.

There's no real steadfast rule other than to experiment and find the things that you like. I mean a lot of times people get stuck just drinking and eating the same sorts of foods every day. Carrots are very good for detoxifying, but I wouldn't just drink a plain carrot juice. I would add to it. I would add ginger, I would add parsley, I would add mint, something to spice it up and give it a little extra push to help benefit.

And on a fast, either preparation for a water fast or doing a juice fast, I generally would recommend eight to twelve ounces of fresh vegetable juice, up to three or four times a day. And some of my favorites for fasting, carrots are readily available. I like beet juice. I refer to beet juice as the vegetable Viagra. It has so many benefits and very beneficial to our heart and vascular system. But it also supports the liver, as you said.

I like adding ginger to just about anything. And getting into the fruits, I like pineapple ginger. I like even apple ginger. It's a great way to get that ginger into you. Sometimes just straight ginger shots are super. But if people aren't used to that, I recommend diluting it with a little bit of apple juice or pineapple juice. It makes it a little bit easier to get down for some people.

Dr. Jockers: Yea, for sure. And so, when somebody is looking to possibly do something like a five to seven day juice or broth fast, in a preparation mode, would you recommend like, let's say, taking a month or so or a few weeks and just replacing one meal with like a big juice or a broth or something like that, to get their body used to kind of that lower calorie, and getting their body prepped and opening up the drainage pathways? Would you recommend that?

Dr. Murray: Yea, I think that's all really good. What I would recommend for people in general, preparing for any sort of three to five to seven day juice or water fast, is at least three days prior to starting, to do just raw foods and with a focus on vegetables. The exception is eating or drinking some vegetable broths and soups and that sort of thing, because I think those can be kind of nourishing and satisfying in the same way.

But I think focusing on raw foods three days prior to a fast and three days after really is just a great way to kind of set the stage for giving your body some tools to help detoxify, and also kind of getting used to a lower calorie intake.

Dr. Jockers: Yea. And what are some of the benefits of raw foods? What are some kinds of meals that people can do with raw foods?

Dr. Murray: Well, you know, obviously salads. And there are lots of different ways to do that this day and age. I mean it's so easy to eat healthy. You can go to the store and you can buy these premixes of organic greens and herb mixes. I've fallen in love with the microgreens. I don't know if you've seen those.

Dr. Jockers: Yea, I have.

Dr. Murray: Man, I tell you, I just think that they taste so much better. The stores here where I live, we have micro-arugula, micro-kale. We have micro-mixes and various sprouts. And I just think it's good to kind of try different things. Eating the same boring vegetable type salads every day I think doesn't make life that interesting. So I like to mix it up.

And discovering and having these microgreens available, I find that they are more alive, and they just taste better. And there are ways you can change kind of the nature of a salad just by the salad dressing. And there are healthy ways to prepare salad dressings. And I'm sure you have some recipes. I have some recipes as well.

So I think variety is very key in life. And I think it's very key in diet. And so I would just recommend three days prior to a fast really get creative in how to enjoy raw foods. If you're just going to focus on eating raw carrots and celery, your body and your brain is going to freak out. You have to put some forethought into it and really plan out your menu, and go to the store and look around and see what interests you. And make it fun.

This sounds really simple, but I encourage people to give it a try. You know jicama is basically a free food. It doesn't have any calories. It costs more calories to ingest it in terms of we use up all this energy to break it down and utilize what the jicama has in its content.

What I like to do with jicama, eating it plain is fine, but I love mustards. And there are different types. I'm kind of a mustard connoisseur. I have three or four different types of mustard in my refrigerator right now. And dipping the jicama in different types of mustards, it mixes things up. And it's a simple thing. A daikon radish is the same thing. I like dipping daikon radishes into mustard.

I'm going to offer a few different things for your viewers. We're going to give them a link. And I'm going to have a magazine that I put together that's basically lots of great information on fasting and detoxifying. I'm also going to put some of my favorite raw food recipes and salad dressing recipes, just some ideas on how to enjoy raw foods.

Now I want to encourage certain people to also utilize raw foods during their fast. You know technically a fast is abstinence from eating solid foods. But there are certain people that I think can really benefit from the assistance of eating food during a cleanse.

When I first got into natural health, I did a lot of fasting. And the first time I went on a fast, gosh, I broke out in this really odd rash. I felt terrible. My head was spinning, and I had joint pain. I had a fever. I just was not doing well at all. And I started thinking about that. I went in and talked to this guy at the health food store. He said, oh, that's a cleansing reaction.

And then I started thinking about that. And the more I learned, I don't think in that particular situation it was a cleansing reaction. I think it was my body freaking out from an incredible release of stored toxins. And I would tell people if they start experiencing signs of auto-intoxication—that's not toxicity in their car; it's their own personal toxicity—I think they can benefit by eating a little bit of raw foods to kind of take that process back a little bit and give some support to detoxifying.

Now someone like yourself who's done multiple fasts and probably does intermittent fasting as well, your body is well attuned and you've probably significantly lowered your toxin load. And these sorts of cautions wouldn't really apply to you. But for a lot of the people that I've seen and who want to make drastic changes in their lives, they've got to sometimes use training wheels before they get to pedal on their own.

Dr. Jockers: Yea, I mean reality is that we've got to get that liver moving well. A lot of people have very, very sluggish phase one through three liver detox, sluggish colons. And we've got to get those drainage pathways opened up. We want our body in a sense to be like a river, flowing like a river, not just stagnant like a pond, or else in a sense we get that auto-intoxication. And obviously it can be significant problems that can occur.

We get a lot of hydroxyl free radicals that are produced. And you can feel sluggish, light-headed, break out in rashes or hives, or whatever it is. And so I think having a proper setup period in preparation before the fast is extremely important.

Now let's talk about what to do when you're finished. Let's say you do a long fast. Clearly your digestive system now, we've put a lot more energy into healing and repairing the body than in the digestive system. And so we wouldn't want to come off of a fast and go eat steak and potatoes, right? Instead, we've got to come off properly. So how do we do that?

Dr. Murray: Well, first there are a few things I would recommend for people to consider while they're going through the fast or cleanse. And I think supplements are okay. And I think supplements can be very helpful, depending upon the types of toxins that you're trying to get rid of.

For example, with heavy metals, we know that B vitamins, as well as essential nutrients like minerals can be very effective at pushing out lead, mercury, cadmium, arsenic, all these toxic heavy metals. So I think that taking a high potency multiple vitamin and mineral formula, extra Bs, and making sure you're getting all those minerals in your diet is really critical during a fast if you're dealing with some heavy metal issues.

I also think that we can give our liver some additional support, various lipotropic factors for the liver, choline, methionine, s-adenosyl methionine, so SAMe, special herbal compounds like milk thistle extract, n-acetyl cysteine. I think these can be very helpful.

I also think it's a good idea for many people to take some sort of water soluble fiber supplement at night before going to bed. I just think that it helps the cleansing process and keeps things moving. Sometimes in some people, when they go on a fast, during the evening there's too much stagnation. There's not peristalsis. So there's not an effective elimination of these toxins that the liver is processing. So fiber, particularly water soluble fibers, can bind those toxins and help escort them out of the body.

So I like to support people with nutrition in the form of supplements during a fast. And I've written on this. And I actually developed a product for Enzymedica called Purify. We have a ten-day total nutritional cleansing program that features some supplements. But I think that it just makes sense to take advantage of these foods in the form of supplements to help protect the body from these toxins, as well as help get rid of them.

Now as far as transitioning off the fast, again, I'm going to go right back to raw foods, and try to do that for three days. And then the third day

maybe have some steamed vegetables along the way. I do consider those vegetable broths somewhat of a raw food. I look on them as being concentrated sources of minerals and electrolytes. And I think that really helps our system during recovery from the fast.

Dr. Jockers: Yea, they're kind of like you get the essence of the plant in there, in a sense, without the fiber when it's just a straight broth. You get that essence, though, and so that can be so powerful.

Yea, and so, what about fermented foods like sauerkraut, kimchi, pickles, things like that? When can you introduce those? Like right at the end of the fast? What are the benefits of that?

Dr. Murray: Yea, I kind of have mixed thoughts on that. I would stay away from pickled and fermented foods during that prep period and also immediately after. And the reason is that they are rich in nitrates and nitrosamines. And our body is still in that process of getting rid of toxins. And I do think it may put a little stress on certain detoxification processes with fermented foods during or too close to a fast.

Dr. Jockers: Okay, well that's really good to know. And so, you talked a little bit about some supplements. What are some other things possibly that could support us as far as supplements, let's say pre-fast and post-fast? You talked about what to do during the fast. What else would help support our body and the detoxification systems?

Dr. Murray: Well, I think there's a lot of focus these days on intestinal health and especially the health of the intestinal lining. And I'm really deep diving into what they're looking at in animal feed, because what they're trying to in animal feed is get away from antibiotics. So they're dealing with some of the same issues that we're focused in human health, such as intestinal permeability, such as leaky gut, and such as small intestinal bacterial overgrowth.

And it's really interesting to see what they're using in animal feed with great results, a lot of volatile compounds that we get with foods like cinnamon or oregano oil or these mints. The mint family includes a lot of things like rosemary and thyme and all these other plants that we don't normally think of as mints, but they're part of that mint family.

But anyway, these volatile oils, they help the enzymes work better. And they're using enzymes in these animal feeds and getting results. And I work with Enzymedica, and so I have a focus on digestive enzymes. And I think digestive enzymes can be really helpful for so many people. Many people in the U.S. are dealing with chronic digestive issues, irritable bowel syndrome, gas, bloating, indigestion, small intestinal bacterial overgrowth. And a lot of times it's not the food that's giving them

problems. It's their inability to break down the food.

And these enzymes that we're using therapeutically these days, these are even more powerful than our body's own enzymes. These enzymes include plant sources and microbial sources. And they exert more powerful effects, and they are effective in a broader range of pH. And the results they are seeing in these animal feed studies are pretty impressive.

And you combine that with what most naturopaths and many nutritionally oriented doctors have experienced for years using these sorts of enzymes, as well as what we're seeing with clinical studies in humans with humans with the use of these newer forms of enzymes. And it's really encouraging. And it really supports the notion that in people who are dealing with kind of weak digestion, maybe that's their weakest link, they really could benefit from utilizing digestive enzymes.

We're focused a lot on the microbiome these days. And here's my prediction, David. When we're looking at influencing the microbiome, what will eventually be shown is that our thoughts about providing more seeds in the forms of probiotics aren't really addressing the issue. Most people, the issue resides in the terrain.

And so we're trying to put seeds. It's kind of like trying to plant grass in the Amazon, throwing grass seeds out there. There's not room for them. And that's what I think we're seeing with some of the probiotics. They're just not able to take seed. We have to kind of terraform, or the term is "rebiotic." We have to change the terrain. And I think that's where these enzymes are really showing value.

A lot of times people with chronic digestive issues, for example, they have a lot of biofilm. And these enzymes are great for breaking down that biofilm. Anyway, I kind of went off on a tangent. But my point is I think that many people can really aid themselves after a fast or even during a fast by utilizing digestive enzymes as part of their program.

Dr. Jockers: Yea, I'm a huge fan of digestive enzymes. It's one supplement that I put most of my patients, my clients on. And typically it's very inexpensive. And it makes a big difference. People notice a change and a difference pretty quickly. And yea, just taking stress off of our digestive system and allowing the body. In a sense that's really what fasting does as well. It's kind of similar to what enzymes are doing. It's just taking stress off the gut, stress off the digestive system, and then allowing the body to start to reorganize the microbiome and to facilitate healing in the system. So I'm definitely a big fan of that.

Dr. Murray: A couple of other things. You know, I think it's really important with fasting is you have a big bolus. We normally think about

bolus with food. But in fasting, I think you need a big bolus of water or juice, because that activates the digestive system. And it causes the gallbladder to contract. It causes the pancreas to kick in. So just stay really well hydrated. And it's okay to really fill yourself up. I think it's really important to keep things moving in that digestive tract. And these digestive secretions are critical for that to happen. So just a little bit of words of wisdom there.

Dr. Jockers: Yea. And I think we're right on the same path with that. Just keep your body flowing like a river.

Dr. Murray: I love that.

Dr. Jockers: Think about that river rather than the pond. And so any final words of inspiration? It's been a really, really fascinating interview. And I really appreciate it, just all the wisdom you provided. Any last words of inspiration for people that are looking to do some sort of detoxification cleanse?

Dr. Murray: Yea. I think that a lot of times when people, especially when they're first getting into help, they sometimes think that the benefits are achieved long term. And that's true. But what I like about getting on an effective cleansing program or an effective fasting program is that the results can be dramatically better immediately. And it's almost like changing your shirt or taking a shower and getting all clean. And you just feel better.

And when people feel better, they have a renewed vigor and vitality and enthusiasm for life. And if you don't have that enthusiasm, then I want to encourage you to follow these recommendations that David and the other experts have been giving you on really transforming your health and your life through fasting. I think that it can be dramatic. It could be immediate. And it's something that can really catapult you to a life full of passion for the rest of your life.

Dr. Jockers: I love it man! Absolutely love it! And yes, finding inspiration, I always tell people, you want to find some reason. When you go into a fast or a cleanse, you may be feeling low. But find some sort of inspiration. I always tell people find a why that makes you cry, whether it's your kids or somebody around you that can stimulate emotion, because you're going to need that as you go through this lifestyle change.

But you're right. You can flip the switch on your health by going through this sort of a process. And so I mean ultimately, fasting has the potential to unlock this dormant healing potential within you. And Dr. Murray, you really touched on that quite a bit and just gave us great strategies for how to prepare for a fast, go through it, and then come out on the other

side and get the best healing results.

So thank you again for being a part of this. And thank you for your contribution really to natural healing and the natural healing world in general. So I really appreciate that.

Dr. Murray: Thank you. It's been my pleasure.

Dr. Jockers: Absolutely. Well thanks again. So for those of you that are listening, just remember, fasting is safe, it's powerful, and it just might transform your life. We'll see you in a future interview. Be blessed everybody! See you soon.

Juice Fasting & Intermittent Fasting for Women

Guest: Erin Elizabeth

Dr. David Jockers: Welcome everybody to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting.

I'm your host, Dr. David Jockers. And I'm excited about today's interview. Because we're going to really talk about women, juice fasting, intermittent fasting, and really how to customize these things. Not only the benefits of them, but also really have customized them for the female body.

So, in order to go through this topic, I brought on a good friend of mine, Erin Elizabeth. Who is really an award-winning journalist. She covers a wide range of health topics. Extremely passionate health blogger and health freedom advocate. If you're interested in knowing the inside scoop or what's going on in the health industry, definitely check out healthnutnews.com. So Erin, thanks so much for joining us here for the Fasting Transformation Summit.

Erin Elizabeth: Thanks, Doc. It's an honor to be here. Thank you.

Dr. David Jockers: Awesome. So tell us your story, and how you really got involved with health to begin with. Some of the struggles that you've had in the past.

Erin Elizabeth: Sure. Since it's been one of these days here, I think I'll just be, like I said, I'll just be blatantly forthcoming and honest. But keep

it succinct, as well, for you.

I was adopted and started out with a pretty bad, I guess beginning, I guess you could say. My birth mother had an abortion when she was pregnant with me, with medical doctors and everything, and that failed. And I was able to survive that. When I was born, I was very, very sick. I was hospitalized the first few months of my life. And they weren't sure that I would make it. And I was on many, many drugs. Antibiotics. Unable to be adopted because of being so ill. But then finally they did allow me to be adopted, and of course I wasn't breastfed or anything like that.

So once my parents got me, they're first time parents. So with a new baby that they're adopting, and I still think that my mom, who I love and adore, who is still with us today. She had kind of a mother's instinct, but they decided, even though it was January, just a little bit after they had gotten me in Chicago. Cold weather. I had a severe cold, plus I was just sick in general. The doctor said it was fine to do all the vaccinations, including the DPT.

So I went into febrile seizures, was hospitalized. They thought I was not going to make it. The priest was called. They did a spinal tap, and were thinking spinal meningitis. Because God forbid that they try to understand that it was just the vaccinations I had.

Now, granted, I had some other things that were set up there that were not helping. But basically I had encephalitis. So they then said I would be brain damaged and probably institutionalized for the rest of my life.

So I'm not, luckily. And it was kind of a miracle. On day 7, when the priest was there, and if I made it, that I would be severely brain damaged from encephalitis. They thought initially spinal meningitis, which is why they did the spinal tap. The fever broke. The seizures did stop, although I was paralyzed on one side of my face. Still this eye is lower. But I wrote a story called *The Girl with the Half Crooked Smile*, because for months there were many baby pictures I posted where only one side of my face moves.

But I did regain the use of the left side of my face for the most part. So that's my beginning.

Dr. David Jockers: Wow. What an introduction to life.

Erin Elizabeth: Yeah.

Dr. David Jockers: So you obviously have a survivor's spirits, being able to push through that.

Erin Elizabeth: Yeah, we kind of consider that a miracle. So my mom

and dad, who raised me. So then, even though they weren't really into health, and my aunt and uncle were very much so. My uncle had a health freedom, I don't know the exact name. If it was the headquarters here in Florida, of all places. Although I was raised, born in Chicago and raised in the freezing cold Midwest.

So made it through all that. So I think since I was so unhealthy as a kid, and they didn't understand. Of course, they didn't understand why. They know I'd had a rough start. But they just couldn't quite figure it out. My uncle, he was also my godfather, he was a big influence on me.

Even, luckily, my parents knew that it was probably not a good idea to have sodas and all those sweetened sugar cereals. But besides that, they were not real health nuts, as I like to call myself. But I think then working for a nonprofit, I got through high school. And was working for a nonprofit group where very much, it was more environmental group. A lot of different things.

One of the things they were teaching us about, just kind of by default by working there, was about organic food. And that was so awesome to be able to learn about that. And that was in the last 80s. So I was still a teenager then. I lived above a vegetarian, organic restaurant. So I think those people, and actually it was by Orthodox Priests. They were not Greek orthodox, I don't know if it's American orthodox. But it was very interesting.

I think those folks just being, again by default in this apartment, I was able to learn while going to school so much about organic lifestyle. And then shortly thereafter, I actually met my birth mother. I forgive her. I love her. I've known her, I found her through a book she'd written about giving me up. So we've known each other since I was 20 years old. So that's a long time.

She was unable to have other children after me, so I'm it. And having then gone to Europe to meet her, through my travels to Europe too, and being very sick. Barely able to make the flights. And I'm only 20, 21. But I would get so sick on these long flights. But while in Europe, learning more about healthy eating more so than we were eating in the US. It's a very different kind of a lifestyle there.

Then I began, when I lived in California, also was into natural health and for a number of years here I taught health retreats on the east coast of Florida. We didn't really do intermittent fasting, but we did definitely discuss it at the retreats. But they were shorter, more 3-4 days. We didn't really incorporate any fasting into that. But I've been doing that. And through the retreats is how I met Joe, Dr. Mercola. We've been together 9 years this month. Just to give you a kind of a little bit.

Dr. David Jockers: Congratulations on that.

Erin Elizabeth: Thank you.

Dr. David Jockers: And I know we met at the Truth About Cancer, and you were there with Dr. Mercola, of course. Most of our listeners probably know him, because he's got the largest natural health website. And we both shared the stage. You brought such an impassioned, every time you've spoken. Just an impassioned presentation on some of the politics that are going on, just the health freedom movement. I was always inspired by the things that you shared.

Erin Elizabeth: Oh, thank you. Before I even started my site, I was reading your site and reading your work. So you're definitely an inspiration as well. So grateful to have you.

Dr. David Jockers: Thank you. Absolutely, thank you for that. Let's talk about some of the biggest mistakes nutritionally and lifestyle based that women are making on a regular basis that's affecting their health.

Erin Elizabeth: Sure. I think that, especially with women more so than men, we are kind of inundated with products. That's the first thing that comes to mind when you say that. So many of them are not natural, and yet as women, I think it's this kind of idea that we just have a little bit different, maybe how we dress, grooming, everything than men. Because guys, for the most part, aren't wearing any makeup. Are not really using, maybe a little bit, but they might not use many hair products. So many different things. Moisturizers and all the things that women do.

So I think starting there, that was one of the first things for me. To go organic with the products that I would use. Because inevitably, we're going to be on stage. Like you and I shared a stage. Or we're going to be in front of the camera. We're going to want to wear a little makeup. But I think it's important to find products that are nontoxic. So whether they're phthalate free, or paraben free, or even if people can find totally plant based products that women will have for their hair, skin, face, nails, all that kind of stuff that maybe men don't have to worry about as much.

And then, another thing I would say that, did you say some of the mistakes that women would make?

Dr. David Jockers: Yeah.

Erin Elizabeth: I would say that another one for women would be that so many, as you know for moms, and even if you're not a mom that's ok to. But for all women, I think so many times women are nurturers, and

they will be, I don't want to say caretakers or care givers, but sometimes they'll expend so much of their energy to help other people. Especially their children or family members. And able to be there to provide for them. Men do that too, but sometimes the women will, I think, just expend themselves too much. So they have to take time for themselves.

So often I don't think women, just by nature are those nurturing creatures. And maybe that's how God intended. So I think they make sure they take time for themselves. And that would probably be true for men too, because everyone is working so hard these days.

And another thing that I would add on there, I would say to tie in with the first one. I don't know if it's more men than women. I haven't really studied this. But I think also there's this pressure upon women by society to be a certain shape or size or look a certain way. It sure seems like, as I see female public figures more than male. If a guy is kind of a big guy, no one gives him a hard time. The woman, too thin, too heavy. There is so much societal pressure put on them that so many I know that I talk with will develop maybe unhealthy eating habits. Not that they may have great food in their homes.

And I've had this happen in my past, as well. Where they will kind of feel the pressure, I don't know, somebody here helping me at the house today, where she's on a diet. And she looks great, but she feels, I'm not sure if it's society or the gym she works out at. She looks great, doesn't need to lose a pound. But she's on a diet, that she has to lose weight, because we have to feel that we have to look this certain way. And I think it can develop into eating disorders.

Or what my problem was, probably, emotional eating. Stress eating. And I know that men can have that too, and definitely do. And I don't want to deflect from that. But I think for women especially they learn healthy eating habits and taking time for themselves, maybe when they're preparing the meal for the family or just if they live by themselves, whatever the case may be. That they take the time to slow down, eat healthy, and learn really healthy eating habits. Maybe intermittent fasting can help, as well. Especially for those who may do emotional eating or have some type of eating disorder. Which there's not just anorexia, of course. But you could just be a stress eater, for instance. Which is very common, especially in women.

Dr. David Jockers: Yeah, I'm glad that you brought that up. That is a huge topic, and a lot of people are not talking about that, either. So thank you for that. So let's talk about juice fasting. I know you're a big advocate of juice fasting. What are the benefits of that? What kinds of things do you like to juice when you go on a juice fast detox? And how do you implement this into your lifestyle on a regular basis?

Erin Elizabeth: Sure. Well I started with doing three different programs, which I won't go into, around different parts of the United States where they all incorporated juice fasting. Just because it was detox, I'm sure many of the people who were going through the program were not exclusively vegan in normal life, but they were while they were doing these programs. They were all raw programs, in three different cities, around the country. So that's where I really began to learn about the juice fasting.

We would have days where we would only do juices. So if I'm really doing a hardcore kind of detox cleanse, I will stick more with just green, all different types of greens. There are so many. Maybe it will be celery, kale. Some will incorporate even a green apple. And so many other vegetables. So I will stick with green vegetables, I should say. Maybe a little cucumber, which is technically a fruit.

But if I'm maybe not being so diligent about it, then I may incorporate some beet. Even some fruits or do a little bit of fresh squeezed orange juice, and things like that. But just depending on what I'm doing. If it's a really hard core juice fast, especially that I may start out doing some beet and carrot juice. Which would have higher levels of sugar. But then kind of wean off onto just doing the vegetables, so to speak. Which people probably know as green juices.

I have a few pretty good complicated recipes that I can always share. I may not know off the top of my head. Because I've always been pretty open, well, juicing I can do. I can cook, but it's never been my strong suit. It's not my area of expertise. If I'm in the kitchen, I'll usually, if I'm doing a video, then I usually have help from a chef. Because by no means do I claim to be a big time chef. Although I can make meals, and have throughout my life.

With the greens, I think that some of the medical doctors or NDs or DCs who I've worked with, they'll do some of the greens being quite complicated. Even having a lot of dandelion, which is very detoxing, they don't always taste great.

And then, of course, I do the wheatgrass as well. Some people don't want to, because the wheat in the wheatgrass. That may be a problem for some people. But it hasn't been for me, so long as I'm doing smaller amounts and I find as I'm doing more of the juice fasting and cleansing my body over maybe that week or 10 days that by the end I can consume quite a bit more ounces of wheatgrass than say on my first day.

Where, back year ago before I knew any better, I'd get the cranker out and do like 3 or 4 ounces of wheatgrass and drink it. And actually, even throwing it up immediately afterwards. Because my body was just a little

too toxic, or it was too much to handle maybe 3 or 4 ounces of wheat grass.

But at the end of the 7 or 10 days of juice fasting, or even just fasting with a little bit of raw food incorporated. But lots of greens, not doing a lot of really any fruits that I found, wow, yeah, my body can handle substantially more wheatgrass at the end of that time. Or even more greens, because it's detoxing that my body is becoming cleaner.

Dr. David Jockers: Yeah. And when we look at things like wheatgrass, you have so much chlorophyll and trace minerals. Just all the biophotons that have been absorbed and are housed inside of that grass. So, when you kind of liberate it, we can't break down that cellulose, that fiber. So you liberate these biophotons and all these micronutrients through the juicer. And then you're drinking that up. And it's going to obviously have tremendous impact on your cellular energy systems, your detoxification systems.

What kinds of things can people expect when they start to juice things like wheatgrass, or making green juices? Even a carrot-beet juice like you were talking about.

Erin Elizabeth: Well, initially I think, and I've seen it, and probably would, more than when I started, just because of even being more busy than I was when I began 10 or 15 years ago. But I know that some people would initially have those detox reactions, where they may have headache, or be a bit lethargic and not feel great. So I know people are like, whoa, I don't know if that's for me if that's how I feel.

But then I think once you get past that day 1, day 2. Same way if you were doing water fasting. Once they'll get past those initial few days, then I think as you're detoxifying. And I'll usually do, if I'm at one of those three places around the country that I completed the program, graduated, whatever you call it. Get my certification. I would incorporate colonics or at least enemas to help further detox. Because for those first few days, I believe that you feel probably the worst. Those couple of days as your body is adapting.

But I notice that people who decide not to do this, maybe they're against it for whatever reason. They're not doing any enemas. They're not doing colonics. It can be difficult because what goes in must come out, and we really want to be able to cleanse our body during that time. So I think what helps me so much is plenty of rest while you're doing that.

Also, there are different modalities, but I would say at least enemas if you don't want to do colonics. And that, again, might not sound fun to people. But we've done that in a few different countries at events we've spoken out. Where they'll put us through their program there. And you

feel so much better when you're doing that, as opposed to not doing any.

You could always, of course, take a psyllium husk or something to help cleanse your body. But I think those extra things like the colonics or enemas can make a big difference. You can even do, after a colonic. I know we're getting pretty specific here, but like a wheatgrass implant. And the energy that it can give you when you do that is pretty amazing.

Dr. David Jockers: Yeah. So you do the enema to flush out, and then you go ahead and add in wheatgrass rectally, right, so you get those benefits passing into the blood stream quicker. And also adding more oxygen and detoxifying the colon.

Erin Elizabeth: Yeah. I always say I'm a journalist, not a scientist. But you the doctor explain it so much more eloquently. So thank you.

Dr. David Jockers: Yeah, for sure. So when we're juicing, I used to always break food into different categories. You have your juice producing, your true liquid producing types of things. You've got cucumber, celery and bok choy. If you're doing a lower carb one. If you're doing high carb you've got carrots, beets. Then you've got your dark greens that you can mix in. So you've got your collard greens and kale and things like that. And you've got your bitters, parsley, ginger, cilantro. So, what sort of combinations do you prefer together?

Erin Elizabeth: Gosh, I'll totally admit that honestly, if I'm doing it, then I'll kind of get out. In fact, some of the books are under this computer that I'm using today. But if I'm doing it, I'll sometimes just do something simple. But a very simple combination that I would do, I like to do a little celery, cucumber, dandelion, kale, and maybe a little bit of cilantro.

I admittedly kind of like, maybe not an untrained chef that's just throwing their own mixes together. I'll either follow a schedule, or like a whole smorgasbord, put a lot of them in together. There's even one that a doctor out of Dallas has given us, where we have 15 or 20 greens in that juice that we're doing. It's actually making me kind of crave it right now. But I could definitely get you a list. And I should know those off the top of my head.

But to give something easy like that, I'll do something like that. Also, sometimes I'll just stick with one, if I'm doing more higher carbs or sugars. I'll just do maybe 18-20 ounces of just carrot juice, or just beet juice. Or a combination of the carrot and beet together. And with the greens, it just depends on my mood. Or sometimes what's available. We're not in a big town here, on a barrier island, and we don't have, I hope I can say the name, Whole Foods or any of those.

So sometimes it's just what the farmer has available, what's in season, or what we're able to get our hands on. Because we don't have access like some people maybe in bigger cities to all the greens all the time. Although we do grow our own, and we will be coming upon growing season here again, which makes it much easier. Especially with our collard greens, and other things. But in the heat of the summer, especially the heat we had this summer, we couldn't grow much during that time.

Except, we do our sunflower sprouts, and also I have added those in before. Sometimes I'll just eat them, but I really like juicing them, like I know they've done at some of the programs I've done here in Florida. I like juicing the sprouts, as well, because sometimes you'll get yourself to consume a lot more than if you were just to eat the sprouts. Which, for some people they love them. But other people maybe they aren't incorporating them into their diets or salads as much as they'd like. So the sprout juicing is also, we like to do. So I throw those in sometimes with the greens and that helps.

Dr. David Jockers: Yeah, that's really cool. And sprouts are just so enzymatically active and alive. Because it's almost like stem cells coming from the plant. So you're just getting all this enzymatically active high nutrient bioavailable food that you're putting into your system. And very low calorie, so there's not much cost on your digestive system. You're not going to produce much as far as oxidative stress consuming them. Yet you're getting all of these enzymes and active nutrients. It's a huge net gain. It's awesome.

Erin Elizabeth: Yeah. The live enzymes are so important. And the other thing that you made me think of, we use a slow juicer. I don't mind whatever brand of people ask me, but I would go with a slow RPM.

Dr. David Jockers: Like a masticator?

Erin Elizabeth: Yes, exactly. A masticator as opposed to, you'll see if you go to your local juice bar or something. When I lived in south Florida, we had one of the best in the country. They just closed after 13 years. But they were on the beach. Not only did they use maybe nothing over 80 RPM, but they actually did most of it in a presser. Your old fashioned presser. Therefore not heating up the greens or destroying any enzymes.

So I probably know more about that than remember what ingredients I put in my juices. But it was amazing how great I would feel. And the only other place I knew down there, which also just went out, was a vegan restaurant that was open for many, many years down there. But we had a Josh's Organic Market on the ocean, which was great. You could sit out and have durian or coconuts. And they do, of course they would do fruit

smoothies with their frozen organic fruits. Some of it was frozen. They would have a little bit of frozen fruit in there to make it colder because that's what the consumer wanted.

But with the greens, that was pretty amazing. They would be using a slow RPM or masticator or just watching them press it with a machine in order to keep all those enzymes live and fresh as possible.

Dr. David Jockers: Yeah, I'm glad you brought that up too. Because I know I've purchased certain brands, like Breville juicer and Jack Lalanne Juicer and stuff like that. They seem to work well for the first month. And then they end up dying on me. Plus, they really don't produce, they're lower cost, which is nice. So lower barrier to entry than a masticating juicer. But they don't have a very long shelf life in my experience.

Also, they don't produce as much juice as a masticator. A masticator takes longer. It's tougher to clean. But you get a lot more of the nutrients out of it. And like you said, it's not really heating it. So they're fully intact. And I think it is a good idea to invest in a masticator if you really want to start juicing, doing it well.

How about intermittent fasting? Let's talk about intermittent fasting and how you apply it, personally.

Erin Elizabeth: Sure. Joe, my significant other, Joe is better at fasting, not eating after dark, or even after 3 or 4. And admittedly, I'm not as well-trained on that. I do better at fasting, skipping breakfast, which he's talked about. Although, I think he'd prefer to see people, and I would probably benefit from the intermittent fasting from eating early on and then stopping and having my fast be maybe after 3 or 4 through that whole evening until the next day when I wake up, like he does.

But for me, I know that's difficult for people, especially if they're having dinner as a family. So that's one, children wanting to eat. So sometimes it can be easier to, I think adopt a plan where somebody is not going to have breakfast. And I know people talk about breakfast being the most important meal of the day. But as you know now people are rethinking that idea. So, I do better then, like, today I haven't eaten yet. Which is a little crazy, because it's just time and everything else. But I will after this.

So, I will wake up and do my best to consume a good amount of water. And maybe take a couple of different supplements. But you're still considered fasting, even if you need a few supplements that you will take in the morning. Then I may not eat my meal until later in the day.

I jokingly might say practice, do as I say not what I do, but I would probably not wait until this late in the day to eat because that can then get you into a later schedule. But some people, if they're up at 6 or 7,

they may skip breakfast but have their first meal be lunch.

And sort of like the Europeans do, what I noticed going over and meeting my birth mother. They take two hours, and everything closes in the entire village or city, no matter where I've been in Europe. And they will take two plus hours to relax. It's so different than the American traditions. They will take that time over lunch to savor their food. Even shockingly have a little bit of wine. But of course, it's probably a lot healthier. As they say, I know people who I have been out with who do drink wine, and they say, oh, I don't do California wines because of the pesticides or the sulfates or all that. But they'll do the European wines only.

But someone may even have a tiny bit of wine, whether they're a drinker or not. I'm not really, so I don't. But they may partake in a little bit of that. But just savor their meal. Eat it slowly, and have their large meal be that noon lunchtime meal. Which I think was originally how things were supposed to be in the states since so many people came over from European nations. Then the lighter meal is dinner.

Some people will even have a little bit later lunch, maybe have a small breakfast and then fast until 2 or 3, and then have their big meal then and then not eat again until the next day. Because they won't have a dinner or they may have a light dinner.

But for me, right now, just being more practical, I do better at skipping my breakfast. And sometimes even my lunch. And then maybe eating one big meal of the day. And there are people who believe in that philosophy, as you probably know, of eating one large meal a day. Saying our ancestors, years and years ago, wouldn't have been able to have three square meals a day. So they have one big meal.

That's something I know some people do and it worked for them. But each person is different, of course.

Dr. Jay Davidson: Absolutely. I love the siesta idea, because ultimately, in our society, fast food restaurants, we should never be eating fast. It's exactly that sort of idea. Fast food is terrible for our digestive system. We need to be in a relaxed state to activate our parasympathetic nervous system so we can secrete the right amount of stomach acid, digestive enzymes, and bile. So we want to be consuming that larger meal when we're in our most relaxed stress-free period of time during the day.

So for most of us, it's actually in the evening. But if we want to do that in the middle of the day, we need to carve that out. Take a siesta. Where we have that time, like you were talking about. It's just important.

And you're right, you can create an eating window based on what's

going to work best for you schedule wise. And also socially, and with your family and whatnot. So if you say, we're going to do our two meals earlier in the day. Great. You just kind of customize your lifestyle around that. Or if you're going to do it in the evening, afternoon or evening, you can customize it around that.

Now, I know there are a lot of people out there that say, hey, women should never fast. It doesn't work well with female hormones. What has been your experience as far as that goes?

Erin Elizabeth: Well, I am the first to admit through two hurricanes in 11 months and having to gut our home, and rip out walls and ceilings twice in less than a year that I have succumbed somewhat to adrenal fatigue. I'm always very open with my audience about if I've gone a few steps backwards.

So I think when I have adrenal fatigue, which I'm still overcoming, then I'm a little more careful and I don't do as well if someone has really exhausted adrenals or maybe thyroid challenges. Or maybe they're going through major hormonal changes. Some women don't, that is true. Men may be able to do it more easily. With the women, they may do better with smaller meals throughout the day.

But still, they could not eat after dark. And another thing you brought up, I want to go back to the women. But you said the dinner, I know people will joke and say, "Oh, come on. That's when the old people eat!" or whatever. But some folks, just because you said, when you relax sometimes after work. But traditionally growing up, we didn't eat until 7:30, sometimes 7:45. We did not eat dinner before 7:30 at night. That's just how I was raised.

But, you could make that meal like the old folks in Florida. We love them. But the elderly folks who may eat that early bird special at 5 or 5:30. There maybe something to that. So that could be your dinner.

For women who are experiencing whether it be hormonal changes, thyroid, adrenal exhaustion or all of the above, I think that it may be more difficult for them to fast. Especially a long-term juice or water fast. But they could still, even if they didn't feel comfortable with intermittent fasting, we're all intermittent fasting to some degree. Because as you know, after we eat dinner, we sleep. Break-fast, breakfast is breaking your fast.

So the women could definitely who maybe fit into that category, just eat an earlier dinner. And I'm not trying, I would imagine it could help some people. Where they were to eat that last meal of the day, maybe when the sun is going down. Have that relaxing dinner. But do their best to not, and I'm doing my best to practice what I preach here. To eat that

meal earlier. I'll sip on a little bit of tea, if afterwards I have that craving because you can't eat. Have a little tea or something. Even a little stevia in it, probably will be fine. Organic, of course. And I do organic raw stevia. And I'm ok with stevia, some people aren't.

But then do my best to go to bed early, and that might help with the adrenal exhaustion. Or with the maybe thyroid really isn't my issue. With just hormonal changes, because I'm at that age where I think the hormones are changing.

And then other women are able to do a 5-day water fast no problem. But for me, maybe in my 20s and even my 30s I could do that more easily. But I don't do as many 5-day water fasts. And right now I probably wouldn't do that until I felt that I'd built myself up a little bit more from these hurricanes. Which, I think the anniversary was yesterday of our last big one.

Dr. David Jockers: Yeah, absolutely. You're also very, very lean, as well. So it could be a little bit more challenging for women who are very, very lean. Basically, fasting is a mild stressor on the body. So if your body is already overwhelmed and it can't adapt to stress, we don't want to add in more stress.

What I've found is that most people can, and I call it the simple fast. It's 12 hours between your last meal and your first meal. So if you finish dinner, which, in my family we try to be done with dinner by 6 o'clock. So if we finish dinner at 6 o'clock, typically we're not going to be waking up before 6 anyway the next day.

And then you start your day, I tell people. Do your best to get 16 ounces of good, clean, filtered water into your system before you even think about food. And if you do that, it actually suppresses hunger. And you typically can start to go longer and you feel energized in the morning. And you can start to maybe push that fast out to 13, 14, 15 hours before you really even feel hungry.

And if you're good at hydrating, if you kind of develop the skill. Because most people are chronically dehydrated. They're not good at hydrating. As you start to develop the hydration skill of saturating your body with water, especially earlier in the day. It just kind of continues to push off the hunger and you start to be able to expand that fasting window. If you can get it to where you're fasting for 14, 16, even 18 hours every day, you're going to get tremendous health benefits. And the hydration will really help. I don't know if you've experienced that.

Erin Elizabeth: Oh yeah, and I think especially during the times where we had to move out for 9 months out of the house, and then back in and out again, because of another storm. I think I became chronically

dehydrated. And that can take a while to recover from, that I've noticed.

And with overcoming Lyme and all these other things, I find so much, the books out there, your body's many cries for water and all that. I think it's so important, yes, in fact I noticed when we're trying to fix some internet issues. I'm like, wow, I don't even have a water. But afterwards, I will make up for that. And I think something that's so important you say that.

In the morning, I would imagine that you then could just drink that water probably if somebody wants to get that water in and they could drink it rather quickly. But what I have been taught over the years, too. This is the hardest part for me, but it's kind of like life in general. To sip that water throughout the day when we're drinking our water. And we absorb it more readily. At least what I'm told by these experts that I've talked with.

So I tend to, oh my gosh, I didn't drink water for 2 hours. And I guzzle down two big glasses of water. And maybe 15 or 20 minutes later, you have to go to the restroom. So sipping it slowly throughout the day kind of like the idea of life, just doing everything not just rushing and then oh my gosh, suddenly you have to have that water. But I find that to be so much more helpful. Even if you just kind of carry it around or measure it. Simple things that aren't expensive or cost any money at all, but that makes a big difference.

When I notice, when I really make sure I have my water intake and I drink it kind of slowly throughout the day. Don't forget and drink two giant glasses after I haven't for several hours, it does make a difference. So yeah, at least for me.

Dr. David Jockers: Yeah, I'm totally with you. In fact I think there are benefits to both. I think drinking a lot all at once, especially in the morning, really good for flushing the bowels. So getting things moving. All your drainage pathways, your lymphatics, kidneys, bowels. Just getting those drainage pathways opened up a lot. Just drinking a lot of water. Obviously you don't want to get nauseous. But drinking as much water up until that point can really help open all those up.

But you're right, it's not going to be the best strategy for optimal daily hydration. And optimal daily energy. That's where you need more the slow, continuous. I always say 2-4 ounces every 15 to 30 minutes. So 2 ounces is typically, I just took a drink. It's like a mouthful. So if you were to take a mouthful every 15 minutes. Or if, for some reason you're not able to do it in 15 minutes, you do two mouthfuls in a 30-minute period of time. You're going to see that your energy, your stamina, endurance, mental clarity stays high.

And again, it will help protect against unnecessary hunger. A lot of times in our society, we're having cravings. We're hungry but we're really thirsty. And so it can help protect against that. So you really only eat when you truly do need to eat.

Erin Elizabeth: Yes. There's so much as a habit. I think another thing for me is not having, it's always difficult, depending on the size of the family or the ages of the family. But to not have the foods that I crave or really don't need or probably shouldn't be having. Just not have them in the house. That can be difficult.

But depending on your family size, because somebody else might want that food. But yeah, it does take discipline, no doubt. And I agree with you 100% about in the morning getting that water going. Like you said, getting everything moving. So I agree. My toughest is probably doing just as you said and recommend, drinking those ounces just like every 15-20 minutes. I'm seeking to be better at that.

I guess we're lucky, I don't know what happened. What the heck happened when I was a kid? What did anyone do? Because you still ran around and ran errands. No one had water bottles. Now everybody has got their transportable water bottle they bring to the gym. I'm not sure how everyone was, they said people were healthier back in the 80s or 70s, but they didn't have water bottles.

Another thing, too, that helped me with the weight loss. Because went from a 39-inch waist to a 26-inch waist, which I'm still at 5 years later, was to, now I have to remember what I was going to say. Food combining, but there was something else in there. As I thought about those measurements, I just forgot.

We're talking about drinking water, food combination, and I know the secret and now I've forgotten it! What was the secret to losing the weight? Not having the foods, but also drinking the water was a big part of it. It will come to me in a second.

I think for me, it was simple food combining and remembering to carry that water around with me. Because just like you said so often we aren't really hungry, we're thirsty. And that's what I realized in my weight loss journey as well.

Dr. David Jockers: Yeah, I think that's powerful. Ultimately, our health walk is really about mastering our own physiology. I tell my clients all the time, the path to getting well and staying well is kind of like getting a master's degree in your own health. It's really a self-study. And it doesn't happen overnight. It doesn't happen in a month. It happens over the course of your life.

And typically, if you were to go and get an advanced degree, it's going to take you 6 months, a year, two years. Sometimes longer to get that degree. You're going to spend a lot of time, money, and energy in order to do that. But at the end of the day, you have something you can carry with you for the rest of your life. When it comes to your health, you have a level of master in your physiology and the unique biorhythms that you have. And how to attune those so you can experience incredible health, energy, and mental clarity. You can bring that with you for the rest of your life.

So, opening ourselves to good hydration strategies. To food combining, like you were talking about. Understanding when we really do need to eat versus when we're just kind of emotionally craving something because we want a hit of dopamine to make us feel good. I think those are kind of the biorhythms that we want to be able to understand and master.

So, Erin, this has been a great conversation. What sort of final words and inspiration do you have for our listeners here?

Erin Elizabeth: I would say, as I know you see, talk, or run into these people. They write you every day, and they write me every day, that are struggling so much with their own health. Or maybe a family member is. I always want people to remember, not only can you take a step back, but that doesn't mean you can't go back and take a step forward. But to keep the faith and to know that there's always light at the end of that tunnel.

I think for some people, and now I can understand so much more, having had multiple fractures and injury and an accident. Whether you have pain, or whether you're struggling with weight. Usually with weight gain or weight that you want to lose. Or chronic fatigue, or an autoimmune disorder. Whatever it might be that you have faith, and that you know that there is light at the end of that tunnel that you can get through it, and sometimes just slowing down.

Which you might feel like you want to rush, rush, rush and fix everything. But slowing down and really figuring out what you're going to do. And know that you will make it through. As difficult as it might seem sometimes, that has been really lifesaving for me a few times.

Dr. David Jockers: Absolutely. Great mindset to have. I just want to acknowledge you, Erin, for all the great work that you do over at Health Nut News. Just being a pioneer as far as getting this health freedom message out and reporting so well on it.

Where can people find out more about you? I know I mentioned Health Nut News. What kinds of things are you working on?

Erin Elizabeth: Sure. So on Health Nut News, I do have a book that I still give away. We're just updating it. Even if someone downloads it, there's no catch. They can go there, put their email in, and download the book if they want. Which talks about the weight loss journey, and probably a few things that I've forgotten in the interview. But they can find me there.

I do a number, I work on a lot of things. So I'd say the thing that's right now I'm working on the very most are the issues we have with, I think I hear the thunder as I speak. You may catch it on tape. But we've had some pretty, I don't even know how to describe it. Devastating things happen here with Florida. With the big sugar industry, which we all know we're doing our best not to support big sugar and buy processed sugar products. At least I am.

I understand people need to indulge once in a while. But they're releasing that water that is in Lake Okeechobee, and they're releasing it from Lake Okeechobee because they've changed where the water is being diverted into the Treasure Coast, which is just south of here. We're on the east coast. Or in southwest Florida. So it's not the most positive uplifting story, yet we need to do something about that.

Because it's not just the state of Florida, but all the Gulf states. I think it will affect all the states, from Georgia up the east coast. We're all connected. And the water goes all around. So whether you're talking about the Gulf or the Atlantic.

I'm working because we've had thousands of marine sea life, endangered sea turtles and dolphins and all that sad stuff washed up on the shore here in recent months on a viable solution to the pollution from the big agriculture and the big sugar companies, and holding those companies responsible since politicians on both sides have pretty much taken some of the millions, or hundreds of thousands of dollars from those companies, and getting them the politicians, if that's possible. You know how hard that can be. To hold these corporations responsible so they don't continue to devastate our waterways and put children, animals, people's pets in the hospital. And of course, the marine life and adults as well.

Dr. David Jockers: Thanks so much for being on the front line and doing that work. We've got to get the word out. We've got to spread the word. You're right, we can't continue to support companies like this that are destroying our planet. As well as our health. So thank you again for doing that.

For all the listeners out there, I just want to remind you that fasting has the ability to unlock the dormant healing potential within you. It is safe, it's powerful, and it just might transform your life. So try it out. And we'll see you on a future interview. Be blessed.

Extended Fasting & Spiritual Fasting Breakthroughs

Guest: Chantel Ray

Dr. Jockers: Hey, everybody, welcome to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind; fasting. I'm your host, Dr. David Jockers. I'm really excited about this interview because we're going to talk about extended fasting, we're going to talk about the spiritual benefits and the spiritual approach to it. And I think you're going to get a ton of value out of this interview.

And so I've got my guest, my friend, Chantel Ray, who's the author of the Amazon bestseller, *Waste Away the Chantel Ray Way*, and *Fasting to Freedom*. She also owns a multi-million dollar real estate business. And after struggling with her weight and with autoimmune disease for years, she began interviewing thousands of thin women for their eating and lifestyle tips. And she used interviews to develop her Chantel Ray Way. Chantel has helped thousands of people around the world lose weight through her Chantel Ray Way of intermittent fasting.

And she's also created multiple programs, tools, free resources to guide readers through her revolutionary approach to weight loss. She's got a podcast, she's got a great website. And she also did a Fasting Reset Summit as well. And she's helped so many people who've struggled with sustainable weight loss really get results. And so Chantel, thanks so much for joining us here on the Fasting Transformation Summit.

Chantel: Thank you so much. Thanks for having me.

Dr. Jockers: Yeah, well, absolutely. Well, I know you reached out to me

and you've obviously got a long history of fasting here or a history here recently where you've gotten great results. So let's talk about that; how you got into natural healing and how fasting became a part of your lifestyle.

Chantel: Sure, so I have personally done so many fasts. I've probably done... just in the last year, I've probably done a hundred 24 hour fasts. I've done probably 20 two day fasts, I've done probably 10 three day fasts. I've done one eight day fast. And then I did a 21 day fast, where I did seven days of water, then seven days of bone broth and green juice, and then seven days, just of fruits and vegetables, and smoothies. So that's kind of my extent of it. But I also do intermittent fasting on a regular basis. I eat in a six hour window. So every day I pretty much eat either 12:00 to 6:00, 1:00 to 7:00, something in that range. And then every once in a while, I might just do, you know, one meal a day. So I've done all of it.

Dr. Jockers: You've got a lot of experience with fasting, that's for sure. So you've done that much fasting in a year. So tell us about your experience. What was your experience, as you did, for example, like that 21 day fast? I'm assuming you did that eight day fast. It was more of like a water fast. So tell us a little bit more about those.

Chantel: Yeah, it was a water fast. So, you know, I believe that there's just so much power in fasting and there's probably three main reasons that I do fasting. One is just, heal my body. Two would be for weight loss. Three would be just to hear from God. And then just for kind of crying out to God in a way that's saying, like, "Hey, God, I'm really serious about this. I need to pray about this." And so it's kind of just a kind of a cry out, like kind of, like a dog kind of goes belly up is kind of the way that I look at it.

And I compare the power of fasting to scuba diving. So I live in Virginia Beach and if you look at our water, it's not like we... I just got back from Hawaii. And it's not like Hawaii water, like Hawaii water, you can literally see the ground but here in Virginia Beach, everything's brown. And so I've never been scuba diving, but I've been 'snuba' diving. And 'snuba' diving is a combination of like snorkeling and scuba diving. But what I say is, like fasting is like, literally like scuba diving. Where you have this equipment, you go underwater, and all of a sudden, you find hidden treasures that you've never been able to see before. Like, you can see the color of the fish and you can see, you know, the coral and everything like that. And so that's what fasting does for me. It's like, your body is hungry when you fast, but your spirit is sharp and everything comes to focus.

Dr. Jockers: Yeah, absolutely. I really feel like that as well and it really helps tap you into your intuition. In Christianity, we talk about the Holy

Spirit, and really helping us be guided by the Holy Spirit. So it's powerful. Now, I know that just about almost every major religion talks about fasting. Can you speak on that as well?

Chantel: Yeah, so my mom's side of the family is Jewish and my dad's side of the family is Muslim, and then I'm Christian. But, you know, one of the things I say for as far as Christian fasting goes, I kind of feel like, I love a station that we have here called K-Love, it's 90.7. It's my favorite radio station to listen to. But like, as I was driving to Richmond to visit my sister, it's like, you can't hear that station anymore. Like all you get is static. And so that kind of happens to us, you know, like, we kind of feel like static and I feel like what fasting does for a Christian, and for anyone, it's like putting spiritual antennas on your ear. It's like you're tuned into God's station, and you can really hear Him clearly.

And I feel like that is in a lot of religions, that's what they say; is that, you know, if you want to kind of slow down and hear God's voice, that's what you're doing is you're putting spiritual antennas on. No matter what religion you do. I mean, my family is... my dad's side of the family is Muslim and they do Ramadan. And what they do is they don't eat from sunup to sundown. And so while its daylight hours, they are not eating, and that's for an entire month. And so if you think about that, that's kind of like eating one meal a day, like eating your meal at night, one meal a day.

Dr. Jockers: And they're not drinking water either. So it's a dry fast.

Chantel: Dry fast. Yes, exactly. And I've done some dry fasting as well, during the day. And the only kind of dry fasting that I personally have done is that; where I just basically do dry fasting during the day, or sometimes I'll just do dry fasting till like one o'clock. So let's say I'm going to do my eating window. I'll just say, "Okay, I'm going to dry fast until I start my eating window."

Dr. Jockers: Okay, yeah, that makes sense. Yeah. And so, then in the Jewish tradition, I know they've got Yom Kippur, which is like a 25 hour dry fast as well. And you know, in the Christian tradition, I think you've got Lent, you've got different things like that where people will traditionally fast. And then what does the Bible say about fasting?

Chantel: So one of my favorite quotes of what the Bible says is that it's in Matthew 6:2, and it talks about it's kind of where this is the point where God's saying, "Do this, do this, do this," and it says, so when you give to the needy... Matthew 6:2. And then in Matthew 6:5, it says, and when you pray... And everyone's like... when you talk about giving, everyone's like, "Yes, amen! Give to the needy." And it's like, "And when you pray..." you know, everyone's like, "Yeah, yeah!" And then it says, and when you fast... and so it doesn't say, if you fast, it says, when you fast.

So it's like, everyone would say, "Okay, well when you give, you should give," right? "When you pray, you should pray." But when it says, when you fast, they kind of push that under the rug. You know, I went to church for years. The church that I grew up in, for the first 21 years, I never even knew fasting was in the Bible because my preacher, he never even mentioned it. And so it's kind of like, okay, you know, if Jesus is saying, when you fast, then He's expected us to do all these things; then we should give just as much attention to fasting, as we do praying and giving. And I think the reason why people don't fast as much because it's just not talked about in church. I mean, just like I said, I never really heard about it until, you know, more recently.

Dr. Jockers: Yeah, absolutely. I would agree with that as well. And let's talk about... because a lot of people are concerned about fasting. So there's a lot of people out there that are like, "Well, I really can't fast. You know, I can't fast for more than, let's say, half a day." So what should those people... what's your advice for those people?

Chantel: I think that one of the things that I like to say is kind of like, have you heard about the couch to the 5k? Where someone takes you from a couch, all the way to running a 5k. And then there's like couch to half marathon. And what I say is like, when I first started running, I don't do a lot of running now, I couldn't run a half marathon, just going and doing a half marathon. And I couldn't even do a 5k, just running all the way through, but you build up to it. That's why they have plans.

And so what I talk about is, you know, in my book, *Fasting to Freedom*, I give you a plan that says, "Okay, if you want to get to five day fasts, here's what you need to do. If you want to get to seven day fasts, here's what you need to do." And just how to build your way up to that because you've got to train your body into going into a fat burning mode, instead of a sugar burning mode. And so it makes it easier. Like, a friend of mine was like, "Will you do a one day fast with me, just a 24 hour fast?" And I was like, "Yeah, sure," but I mean, it's like for me to do a 24 hour fast, it's just so easy for me now, because of the amount that I've done. It's like asking someone who's a marathon runner to do a 5k, they'd be like, "Sure." So it's a matter of really just getting your body to the point of, you're building it up. And so just to say, "Oh, I can't do it," that's just a cop out in my opinion. And I'm going to be very blunt about it. But everyone, you know, in my opinion, you can work your way up to getting there.

Dr. Jockers: Yeah, I always tell people, fasting is like a muscle, kind of like what you're saying here. If your muscle is really weak, you've got to obviously start to train it, just like anything else. And so you start training it slowly but surely, and then you get stronger, more efficient with it. Your body gets more metabolically flexible, more energy efficient; it becomes a lot easier to do. And so what have your results been from...? Let's talk about... because I know you've got books about, you know,

Fasting to Freedom and weight loss. What have your personal results been through fasting, from a physical perspective? What have you noticed in your body?

Chantel: So in my opinion, there's a few reasons of why someone should fast. And I kind of created an acronym for it and the acronym is HOPE. And so the H stands for Heal and Hear. So if you need to heal your body or you need to hear from God, that's the H. And then an O is to Overcome difficult times. And so if you're just in like a place where you're like, "Oh my gosh, this is just terrible," Isaiah 58 says, "You will find your joy in the Lord." And he's talking about fasting during that time. And I think that P stands for Provision and Protection. So if you're like, financially, "I'm in a rut, like, I need God's provision right now," or you need His protection, that's what P stands for. And then the biggest one that I think is E, which is Enslaving sins.

And so for me personally, I really struggled with overeating. Running to food, like, I basically kind of say, I'm very vanilla. Like, I don't drink, I don't smoke, I don't curse. I don't do this, but for me, when I was stressed out, I'd be like, "Where's the brownies?" You know, like, I would be overeating. And so that was a sin that I just could... you know, people say, the Bible says, put a knife to your throat if you're given into gluttony. And so for me, I had to say, "Okay, I've got to do something." And if you look in the New King James Version, you have to look in one of the older versions because in some of the versions, they took out the word fasting. But there's a point where there's a boy, and there was this like demon inside of him. And the disciples could not cast it out, you know? And so they go to him, the disciples go to Him and they say, "Why couldn't we cast this demon out?" And Jesus was able to cast it out and He said, "This kind can only come out by nothing but prayer and fasting."

And that is so powerful because there are things... I believe this with all my core. There are things... you can be a great person, you can be this, but there are things that it's like a stronghold that you've tried and tried and tried, but you cannot break it. And it's like, fasting is one of those things. I mean, the Bible says it. What does it say? "This kind can come out by nothing but prayer and fasting." The combination of the two is just so powerful. And for me, that's what really kind of broke my chain of overeating and that bondage to food.

Dr. Jockers: Yeah, and that's such a common... in our society, most people are addicted to food. I mean, I think that ultimately, we've got a lot of spiritual baggage, emotional baggage that we can easily cover up by this constant desire to eat because eating releases dopamine and serotonin. We get these kind of feel good neurotransmitters, a feel good flush in our system. And we don't really go deep and ask ourselves deep questions. And you know, in a sense, it's almost like just living on the surface rather than, you know, again, going deep where the healing

happens. So I think that's really powerful.

I've noticed that for myself as well, I grew up... I've always been really, really thin. And my mom would always try to get me to eat more and more and more. So I just kind of developed this overeating tendency, and it actually got me very sick in my early 20s. So fasting has really given me freedom. And I always tell people, I don't eat necessarily less because when I do eat, I feast, but I just eat less often and I'm not driven by this constant desire to eat. And so what else have you noticed with that? Like, when you do eat because obviously you're not eating... you know, you're eating in a six hour window. Are you typically eating like twice a day? What's your typical eating plan?

Chantel: So if I am just trying to maintain my weight, I will eat two times a day. I'll eat... you know, I like to eat a bigger lunch and a smaller dinner; some people are vice versa. But I like to have a bigger lunch and then a smaller dinner. But sometimes if I'm feeling like I'm gaining a few pounds or if I'm feeling like I really need to accomplish a lot at work that day, I'll just fast all during the day and just have dinner. So, the times where either, I need more clarity and more focus, I'll just eat dinner. Or if I'm feeling like... as soon as I feel like I'm gaining a little bit of weight, I'll move to eating just one meal a day. And that really kind of brings me right back to where I want to be.

Dr. Jockers: Yeah, that's cool. That's cool. Now let's talk a little bit about extended fasting. Let's say somebody's ready, they're like, "Okay, I really want to do a five day fast," what are some things they should do to help prepare themselves to do something like that?

Chantel: So for me, I always get an accountability partner, like find somebody to fast with you. So I have a fasting group on Facebook where you can get... even if you don't know them, you know what I mean? Like if you literally are like, "Hey guys," like we'll have people in the group will say, "Hey, guys, I want to do a three day fast. Who wants to do on with me?" or a two day fast. Because what will happen is, as soon as you do the fast and you start getting hungry... I'll give you a perfect example. One of my girlfriends, I was telling her the power of fasting, we were going on a walk, and she only eats like... this is how she eats. She's a thin eater. So kind of, you know, a lot of times people are like, "Well, how did you learn about intermittent fasting?"

Well, when I started interviewing over a thousand women and finding out what they did to stay thin, none of them told me they do intermittent fasting. They were just like, "I started eating at like 2:00, one o'clock, two o'clock, I'll have a little snack, and then I have dinner." But they never called it intermittent fasting. And so, interview after interview after interview, I'm like, "None of these girls eat breakfast. I thought that was the most important meal of the day, what's going on?" And so it was

a real revelation to me.

So anyway, one of the thin eaters that's in my book, her name's Christy. And she was like, "I want to do a three day fast with you." And I was like, "Okay, she's gonna nail this," because she barely, she's already used to only eating one meal a day and a snack. And at five o'clock that day, we were going to do a three day fast together, she was like, "I can't do it, I can't do it." And I was thinking, "Wow, here's someone I thought was gonna slay it," but people don't realize how hard it is. And so, again, she wanted to jump to doing a three day fast. Well, she never even did a 24 hour fast. So she needed to start with that first.

So that's my biggest tip, is start small, work your way up, go through the proper protocol, but get an accountability partner that's really going to hold you to it. And you know that you're not just saying in your mind... because you'll come up with all kinds of reasons like, "Well, maybe God doesn't want me to fast right now," or, "Maybe this isn't a good time."

The other thing for women that I think is very important is their menstrual cycle. It's absolutely crucial. So if day one is your... let's say, the day that you start your period, for me, days 15 to day 22 are the best days for me to fast because I was always like, "How come I could do it fast, and sometimes it would be so easy?" I was like, "This is amazing. God must be really working in me." Which that is true, but at the same time, your hormones for a woman, think about it, like the couple days before your period, you're ravenously hungry.

So it's like your body is telling you like that's when you need to eat. That's not the best time for you to do a three-day fast but I never even thought about that. So that's a big thing for women is to look at that. And I think just writing it down, like making it written and putting it down. Saying, "I'm going to do this long of a fast," and posting it on Facebook. Post it on Facebook, post it on Instagram, letting everyone know that that you're doing this. You've now kind of put it in stone that you're doing it.

Dr. Jockers: Yeah, I think those are really some great tips. Having that accountability. Yeah, for females doing it at the appropriate time of the cycle is so important because right before the period, you get this huge... you need this for a huge rise of estrogen and estrogen really typically follows insulin. And so you actually need higher levels of insulin, you need to be eating during that period of time. And typically it's going to work a lot better. You're going to feel better during that phase. So like you said, right after ovulation, which is day 15 and 22 is a really good time, somewhere in that window, to do your fast.

And yeah, writing it down, I think that's so important. I always tell people also to, during that period of time, you know, especially if you're struggling kind of with the emotional element; that would be a great

time to schedule a spa day or a massage or something along those lines. You're saving money, you're not buying food, so reinvest that. Get a massage. That can be also something that you look forward to. Rather than the meal, you're thinking, "Okay, I'm gonna get that massage on, you know, Tuesday at four o'clock," or something like that. Which can give you... you know, in a sense can help you during those tougher times during the fast. You're going to have hunger and issues like that in waves, they're going to come in waves.

Chantel: And that's so important because that's what you have to remind yourself. There's a couple times where you're going to get to the point where you're like, "I literally cannot go anymore." And the thing is, is that you absolutely can. Like that is where you have to put that positive self-talk. And I will tell you, one of the things, like when I've been like, "I'm just so weak, I can't continue on," when I would like go for a walk, I would come back from the walk and I'd be a whole new person. Because people think, "Oh, I don't have the energy to do a walk. I'm tired. I don't have the fuel." I don't know what it is about going for a walk but I would literally become a new person as soon as when I got into that like pit.

And then obviously praying, you know, the whole point of fasting, if you're doing it for a biblical reason, is that you use that time, instead of eating, to pray. And a lot of times people forget that. Even if they're doing a Christian fast or a biblical fast, or you know, for Ramadan or whatever, they just will do the fast and they forget all about praying and reading the Word. I do worship music. I love to... I'll just find some YouTube... if you go to chantelray.com/worship, we actually have a whole bunch of my favorite worship songs that I play while I'm fasting.

Dr. Jockers: That's awesome. Yeah, yeah, that's what we do too, my family, we put on worship. We have a worship night, every night, pretty much. My kids and honestly, we just worship and pray and so it's awesome. But you're so right, I mean, getting out and moving is going to help actually induce more serotonin, more dopamine, which will help keep you more balanced. And so that's so important. And, you know, it's just like any other addiction when it comes to food.

Like, for example, my father in law, he's trying to quit smoking, and we've talked about it. And it's like, you just take it five minutes at a time, right? When you get the urge, you say, "Can I make it five more minutes?" And you just keep telling yourself that. Those short wins will help propel you, help give you more and more momentum. So I think that's really important. Now, what else can somebody expect as they go through the fast? Are there particular days when you first get going that are harder than others? Is there like a sweet spot that you've noticed?

Chantel: Yeah, I feel like for me personally, if I'm doing a three day fast,

day two is my worst day. And then once I get to day three, I'm really, really doing well. And so it's funny because I do a lot of 48 hour fasts and it's really because by date two, at the end of that 48 hours, I start really, really feeling bad. And so, just a couple tips, like for me, you know, I try to do water fasts as much as possible. Every once in a while if I want to extend it, let's say I'm on a 48 hour and I want to do a three day or a five day, I will do homemade bone broth. I will do water with lemon. I'll do water with fresh squeezed orange juice, like this much orange juice to, you know, maybe like, you know, one fifth water with one part orange juice

But I try to do as much as I can as a water fast and then if I'm trying to extend it... I call them... in my book, I call them crutch drinks. Because it's like you feel like you can't walk anymore and it's like, "I need a crutch drink." But I try not to use them. But if you're beginning to fast I absolutely think you should. Like, I have a green juice recipe that's really like kale, spinach, cucumber; that is really good that I'll make but I try to not have very much sugar. And if I am going to, it's literally that much juice, fresh squeezed juice. Now, I'm not having Tropicana in a big thing of water to kind of take me to the next level.

Dr. Jockers: Yeah, it's great and that's when we kind of get into this partial fasting, right? So we start to add in a little bit of calories, but certainly not much, and get incredible benefits doing that as well. Whether it's bone broth or juice, or something along those lines. And then how about salt? Do you do salt?

Chantel: Yeah, that's huge. Yeah, what I literally do is I just take a pink Himalayan salt shaker and take some out. And it's funny, I'll just put it on the bottom of my hand and I literally just go like that. And I just eat it just like that. But it's the best thing. You know, I've tried different electrolyte powders, they're okay but sometimes, I think that they will give me like a foot cramp or something like that, because I feel like they actually change your electrolyte levels, and you don't get as balanced. So I have to be careful with those.

I found that the best thing that really helps me is just even... oh, I know what else helps me. If you take like a pickle juice, you can get like sugarless pickle juice. That's a really good one because sometimes people are like, "Eew, I don't want to just have salt." Just take one tablespoon of pickle juice and that kind of will revive me a little bit.

Dr. Jockers: Yeah, that brine can be really helpful. Yeah, when we fast our insulin goes down and when insulin goes down, you excrete sodium. So, really need to replace that sodium or you can get very dizzy. You can have excessive fatigue. So when you're taking just a little bit of salt, you'll notice that you respond a lot better. Your energy's better. Your mental clarity is better. So, very, very important. I've seen a lot of people

just really crash on fasts, on doing different fasts because they weren't replacing the salts. So I think that is important.

Chantel: Oh, and the other thing is, is I don't think people realize... like, they're like, "Just drink water, just drink water, just drink water." And I think what people don't realize is if you drink water too fast, you've risked diluting your blood, which is like, you know, your kidneys are going to have a harder time. And so, yes, I drink water but I definitely don't chug water. And that is a really important thing because that actually is having the opposite effect of what you want. And so I drink water to where I'm thirsty. So like, when I'm thirsty, I drink water. When I'm not, I'm not just like, chug, chug, chug, chug, chug that water, because that's not good for your kidneys as well, while you're fasting, if you're drinking too much water.

Dr. Jockers: Yeah, let's talk about how to break the fast. Let's say you do a five day fast or something along those lines, what are some of the best strategies for breaking the fast? Because I mean, obviously, if you start just eating large meals all over, you've already shut down your digestive system. And you're also at risk for developing something called refeeding syndrome, if you take in too much too quickly after an extended fast. So, what are your thoughts on that?

Chantel: So one of the things that you can do that really helps me, even before the fast is doing like the day before the fast, especially if I'm doing a longer fast, I'll do like a special smoothie the day before, or I'll have just fruits and vegetables the day before. But the best foods to break a fast are going to be just raw fruits or vegetables or cooked fruits and vegetables. Bone broth is really good. Any kind of soup is good, but anything that is already like... like sometimes I'll take soups and I'll put it in the VitaMix. So like, I'll make a chicken and vegetable soup. But what I'll do is I'll put it in the VitaMix so that it's getting it like purified, so that my body has an easier time digesting. But smoothies is really the best thing, in my opinion, for the very first thing, it's either a smoothie or a soup that has been kind of purified. Like a butternut squash that is, you know, easy on your stomach is probably the best things that I suggest.

And as you get... like now I could do a three... I can do a three day fast and I could pretty much eat what I want when I'm done with that three day fast. And the reason is, is because my body's so used to fasting that it just is like, "Okay, now we're eating again." So I don't have to be as careful, and the longer you do it, the less careful you have to be. But I would say 48 hours. When I do a 48 hour fast, I'm not as careful. I pretty much just... whatever my body's craving. I would say on the three day fast, I really do start getting, you know, smoothies and soups and stuff like that. Especially for the first meal of whatever it is that I'm eating.

Dr. Jockers: Yeah, what I always tell people is, you know, your digestive

system actually is still working for the first 48 hours. So you're still producing stomach acid and bile and things like that. After that your body starts conserving energy, so it stops putting energy into producing digestive juices, and diverting it more towards the healing; so, once you get into day three. So as you get into like a three day plus fast, I always tell people, ideally, the ideal ratio is like one recovery day for every two to three fasting days. So especially if you're very sensitive and you already had digestive issues in the past, you want to be real conservative with that.

So on those recovery days you're doing things like broth, smoothies, you know, well-cooked soups and stews; all the things that you just talked about, fermented foods, sauerkraut and kimchi and stuff like that; pickles. Just to really get your digestive juices flowing well, by the time you add in, you know, what and stuff like that or things that are harder to digest, nuts. You want to make sure that your digestive juices are flowing well.

Chantel: Oh, I do have one more tip that I do. So I don't know how much people have heard about food combining. And I don't do a ton of food combining. But what food combining is, is saying that your body basically is able to break down certain foods with other certain foods. So like for example, fruit; fruit is so easily digested in your body, you can break down fruit in 20 minutes. And so what I do is I practice food combining when I'm coming off the fast. So I don't do it on a regular basis but I do it when I'm coming off the fast.

So what I'll do a lot of times is I'll have a smoothie or if I'm not going to have smoothie after the fast, then I'll just have fruit, but I'll have fruit complete by itself. And so basically what they say is like vegetables can be with animal protein and then you can have... you know, starches kind of should be by themselves. And so, I practice a little bit of food combining because I know it's easier for my body to digest. So that's another tip that I give to people. And I don't do that on a regular basis, I just do it when I'm coming off the fast.

Dr. Jockers: Yeah, I think that's a great idea. And also, especially when you're coming off an extended fast, I try not to apply real strict intermittent fasting rules as you're coming off of that. So you might... you know, because your stomach, you're not going to be able to eat a lot at once. So you might just do like a butternut squash soup and then like two or three hours later, do an apple, you know, and things like that. So, just not being as... because you really need to refeed, especially if you're doing an extended fast. It's important that your body is sensing that you're not in a time of famine for too long. So when you go into the refeeding, until you get back to kind of your normal diet, you know, just feeding as you need, right? Feeding as your body tells you and you know, just small amounts spread out throughout the day, I think tends

to work well. Have you noticed that as well?

Chantel: Yeah, absolutely. And the other thing is for me is that, you know, I'm hungrier. Like when I come off the fast, like you're like, "Wow," you know, your body is telling you that you are really hungry. And the other thing I didn't mention is, you know, I don't eat a lot of, you know, white flour, potatoes or sugar, you know, dairy and stuff like that. I pretty much don't, that's not a big staple in my diet. But every once in a while, if there's something I'm craving, I will eat that. But when I'm coming off the fast, I am eating 100% whole foods, like I'm not having a gluten... let's put it this way; I'm not having a gluten free brownie. I'll have a gluten free brownie another time but I'm not having it the day I come off the fast.

Dr. Jockers: Yeah, absolutely. Yes. Some people will come off the fast and go to Pizza Hut or something. Not a good idea. That's a total disaster right there. So yeah, it is important how you come off of the fast. You know, it's very, very important to be intentional on that too. So, this has been a great interview, Chantel, and I just want to like give you a moment to share any final words of inspiration and also where people can find out more about you, the books that you offer, and your website.

Chantel: Yeah, you know, the last thing I want to say is if somebody feels like they're fasting for a spiritual reason, it's funny because I just prayed for someone who was fasting and they were going through a legal battle. And you know, we finished the fast and nothing seemed to go well. You know what I mean? Like it wasn't any breakthrough that he was seeing on it. And so, I think that sometimes... you know, there's a great story in second Samuel about David and David had sinned with Bathsheba. And he had pleaded with God for the child. He had fasted for days and was like, "God, please don't take my child." And then on the seventh day, the child died. And he just got up and started eating.

And all the servants were like, "What's going on?" like when the child died, and he was just like, "You know, when the child was alive, I fasted and I wept." But, you know, he was like, "Who knows? Maybe God will be gracious to me and let the child live," but he's like, "Now that he's dead, why should I go on fasting?" And so I believe that sometimes people... you know, in that situation, that was God saying, you know, "Hey, even if you fast, sometimes it's not just for you to get the outcome you want," but it allows you to be at peace. Like what happened? He was like, "Okay." It gives you this sense that even though God said no to whatever it was, you're able to have more peace about whatever it is. So that's one piece.

And the second piece is, is that I just can't stress that... you know, for me, with my bondage to food, it didn't happen from one fast, two fasts, three fasts, it was hundreds of fasts to get to the place that I am now;

that I'm not in bondage to food anymore. And it didn't have... so a lot of times people are like, "Well, Chantel, you know, I tried doing a fast and it didn't work. And I tried this and it didn't work." And I prayed about things and done multiple fasts before they come through. And so that's what I just want to encourage people with that last bit of encouragement. That it's not a one and done, it is multiple times that you're going to be doing fasting, and that it is truly powerful, but it may not be one time that it happens for them.

Dr. Jockers: I think that's so good. It's just a reminder that it's really part of a lifestyle. And so, fasting is a posture and it's just a part of the way that that we live, you know, the way that we carry ourselves. And so whether you're looking for spiritual breakthrough, physical health results, it's just part of your lifestyle is incorporating fasting and the great thing is that it doesn't cost you anything, right? So it's something that you can add into your daily lifestyle and save you money, and get amazing breakthrough in your life. So, it's been great, Chantel.

Chantel: Well, and I also have on my website, I have, like a really great protein shake that I have on there that is really clean ingredients and some multivitamins. That kind of just will help you kind of making sure that you have all the nutrients you need, if you need it. Where you feel like, "You know, I can't make it through." Sometimes I'll take vitamin... one thing I'll take is vitamin C, or I'll take like a multivitamin and take it with water if I'm feeling... that's another crutch that I'll use sometimes to kind of make it through as my last thing. But I have three books now. I have a Bible study on fasting, called Freedom from Food. I have Waste Away that talks about intermittent fasting, and Fasting to Freedom, which is more about the extended fast.

Dr. Jockers: Well, that's great. Where can people find those?

Chantel: If you go to chantelrayway.com is where you can find everything.

Dr. Jockers: Great. So guys, definitely check out Chantel's website. She's got a ton of great resources. Chantel, thanks again for being a part of this. And for those of you guys out there, you know, just like we've talked about in this interview, fasting really has the potential to unlock your dormant healing potential. It's safe, it's powerful, and it just might transform your life. So, start practicing it. You learned a lot of tips here in this interview, start putting those into action. Definitely leave comments, questions. If you need anything, reach out to Chantel. You can check out some of her Facebook groups and be a part of her community. And if you do that, I think you're going to get great results. So be blessed, everybody. See you soon.

Creating a Fasting Lifestyle for Hormone Optimization

Guest: Dr. Dan Pompa

Dr. David Jockers: Welcome, everybody, to the Fasting Transformation Summit, where we are uncovering the most powerful, ancient, and inexpensive healing strategy known to mankind: fasting. I'm your host, Dr. David Jockers. I'm really excited about really a world leader in cellular healing, a great mentor to me, and a pioneer in really getting fasting strategies out as a primary healing tool to doctors all around the world. This is Dr. Dan Pompa, from DrPompa.com, from Cellular Healing TV. And we go way back. He was also on our Keto Edge Summit.

We're going to dive into really this idea of fasting and ketosis today. So Dr. Dan, welcome to the Fasting Transformation Summit.

Dr. Dan Pompa: Yeah, thanks for having me. I love this topic. Can't wait.

Dr. David Jockers: Absolutely. So, let's get started with ketosis. I know you were on our Keto Edge Summit, so let's get started with ketosis and fat adaptation. And then we'll branch from there into fasting and how all this plays together.

Dr. Dan Pompa: Yeah. I'm hoping everyone saw the Keto Summit, so we can kind of talk like they know what ketosis is, and how beneficial ketones are. But when you look at ketosis, which I'm a believer in ketosis. It's a tool that I use all the time. The doctors that I work with and teach, we all use it.

However, to get some serious benefit from the levels of ketones we need, it would be impossible to do without fasting. So, just in review. You

make ketones by breaking fat down. So if we get our carbohydrates low enough, we can actually force the cells to use fat as energy. And when it burns fat, it makes these things called ketones that your brain can use. Because your brain can't actually use fat like the rest of your cells in your body. It needs to use either glucose or these things called ketones.

So when we get our glucose, our carbohydrates way down, then the body will make these ketones as a byproduct of breaking fat down. So the body cells are using fat, our brains love ketones. And ketones, in review, have a lot of benefits.

Number one, they burn extremely clean. They lower inflammation of the cell. Huge. They can turn off bad genes that get turned on. They can have a really healing effect on our gut and the microbiome. So, there's a lot of benefits.

They help heal the brain. One of the ways, the first things we notice when we bring someone into ketosis. And it takes maybe two to four weeks to get fat-adapted or make these ketones. One of the first thing we notice is the brain just clicks on. All of a sudden, it's really easy to remember where your keys are.

Literally, for myself, I notice when I transition because I can start remembering where everything was on a page that I read. So, we become fat adapted and we make these ketones. And that's just a little review. When we fast, we make much higher levels of ketones. And that's one of the huge benefits of fasting.

Dr. David Jockers: Absolutely. I know you have a strategy, just kind of a daily strategy. Or I should say weekly strategy, the 5-1-1. Which I've adopted, and I use with a lot of my clients, as well. Can you explain that to the listeners?

Dr. Dan Pompa: It's part of what I teach, something called diet variation. Feast-famine cycles. One thing we've learned, I work with so many doctors training them, so clinically we can take in a lot of information and all come together as a group of doctors and say, this is working. This isn't. What are you finding?

One of the things we know just by being on low-carbohydrate diets for a long time is eventually, the body starts to slow down fat metabolism. It does that because it wants to survive. If you force the carbohydrates down in a state of ketosis, what can happen is, your body says, ok, my number one fuel is fat. So I want to be efficient with it. Therefore, it slows the fat burning down.

So then what can happen is your body can start utilizing some of the muscle. So people then tend to start losing muscle, and gaining a little

fat. And unfortunately, the fat that you start holding onto is where you don't want it. It would occur right in the front of my belly. Exactly where I don't want it, that's where it occurs. Ladies say, it's on my thighs, what's going on? I'm eating 10 grams of carbs a day. What's happening?

Well, one of the things, and body builders knew this for years. One of the things that you do is you add in just one day of basically a feast. Where we remind the body it's not starving. Simple as that. We remind the body there's plenty, and then it doesn't say, ok, I'm going to hold onto this precious fuel source, the fat.

Because all the body wants to do is survive. So if fat is its number one fuel, it wants to be very efficient because it wants to survive. We don't want it being efficient. So the moment you have a feast day, as I like to call them, then the body says, ok, we're fine now. We can go back to burning fat.

So people will come out of ketosis for a day, basically after a few days. I'll get an email saying, oh my gosh, my ketones are out, my glucose is up. My ketones are down. I don't like that. I say, hang in there. Because what happens the following day is your body then becomes more efficient at using fat again. And you become leaner.

But more importantly for us, we don't want the body in that survival mechanism. So we just basically biohack it with that.

Now, you said 5-1-1. So, we have 5 days of ketosis, we'll say. Then we have one day that I just mentioned, the feast day. Now we throw another day in to fast. We either don't eat at all that day, or maybe we eat one meal. So you maybe 23-hour fast. Either way, you're creating something called autophagy, which we'll talk more about.

But simply put, the body in a fasting state. Even 23 hours. Will reach for its bad tissues first. It will reach for the bad cells. The bad DNA. The bad protein. The rubbish. The things it wants to get rid of. The trash. The cellular rubbish. It's that smart that it doesn't want to break down good tissue. That's called autophagy.

2016 Nobel Prize was won by a gentleman who basically researched the topic of autophagy and how good it is for our health. So by adding that fasting day in, number one, we're producing really therapeutic levels of ketones. You could never product just by being in ketosis.

Number two, we're downregulating inflammation, because we're becoming more hormone sensitive at the cellular level. And number three, we're getting more autophagy. So one day a week of fasting. One day of week of feasting. They don't have to be back to back. It can be random as you desire them to be. And 5 days of a ketosis diet. So that's the 5-1-1.

Dr. David Jockers: So that's the diet variation principle there, with the 5-1-1. And I find that to be just really sustainable. Most people can say, ok. Because obviously fasting is a sacrifice. So most people are like, ok, I can do the one day fast if I can have that feast day. So it becomes much more of a sustainable lifestyle, so the compliancy really goes up.

Dr. Dan Pompa: People look at it as a cheat day, but really, no. This is a beneficial day. Now, look. I would recommend, could you throw in, the pizza, the ice cream. Yeah, you could. I would argue, if you're healthy, go ahead. But if you're challenged, I would say don't do that. Eat healthy carbs.

To make it a feast day you could have a few things. Elevated calories would throw you into basically the body saying, ok, we have plenty. Elevated protein can work instead of carbohydrates. If you say, I just don't do well with carbohydrates for other reasons, great. Do protein. It works too. Or, elevated carbs. Your choice. Just remind the body it's not starving, and the magic happens.

And then, we can take it a step further. 4-2-1. Once people get more efficient at this, we add two fasting days in a week. Random. I typically do 2 or 3, and I really never know the day. So my time, right now, in this interview it's almost 2:30. I haven't eaten yet. So I may or may not even eat tonight, honestly. Because I do, like I said, two or three fast days a week.

But mostly, if I do one where I don't eat at all, it's just one day. But typically two or three where I'll just eat one meal. But, I always, always, always have one or two feast days. And that's the feast-famine. And by the way, there's even beyond what we just said reasons why this works so well.

When you do a feast-famine cycle, you're making the body adapt to large amounts, small amounts. Fasting state, feast state. That adaptation, just like exercise. When the body adapts, I call hormone optimization. The body optimizes its sensitivity to your hormones. Which means you're hearing testosterone more. You're hearing estrogen better. Your cells are hearing it better. So it's not about how much hormone you have, it's about how well the cells hear them. And that is really a state of health.

So forcing adaptation is like exercise. If you do the same exercise in the gym day in, day out. The body gets used to it, and you don't get results. But when you change it up, now the body has to adapt, and the adaptation raises up growth hormone. You become more hormone sensitive at the cell. And you get results. No different with diet than it is with exercise.

And another great example, it's kind of in vogue right now, right, the

hot-cold thing. So people go in really cold pools, they'll go in the hot then the cold. And we know that it stimulates weight loss. It breaks through weight loss resistance. Why does it work? Because when you put yourself in a cold pool of water, or a cryochamber and drop the temperature down to 150 below zero for three minutes, your body literally thinks it's going to die. And then you step out, and it doesn't.

What happens is, it adapts. It raises up growth hormone dramatically. It makes your cells very sensitive to the hormones. And, it raises up another hormone called norepinephrine. And what that does is it has a massive anti-inflammatory effect for hours after the hot and cold chamber.

So all we're doing with the diet, feast/famine is doing the exact same thing as exercise. The exact same thing as hot and cold. It works to break through weight loss resistance. It works for hormone conditions. It works for gaining muscle, losing fat. Whatever you desire. It works.

Dr. David Jockers: Yeah, absolutely. I'm with you on that. It's kind of these microdoses of stress, this hormesis principle, just make us stronger because our body is forced to adapt. Like you were saying. And I've noticed that for myself. About 6 months ago, I started doing two fast days. Where I would do one meal a day, basically, 24-hour fasts. One feast day. And I've always been underweight. And actually, I've noticed that I've actually gained 3 pounds of muscle doing that.

And you would think, I'm eating less. Or at least less meals. I'm eating 12 meals, basically, a week. Yet I've been able to actually gain muscle mass doing that.

Dr. Dan Pompa: My wife, they see her on Facebook. I'm sure you've seen her. And they're like, oh my gosh, your arms! She looks like she lifts all the time. She really doesn't. But with each extended fast, and by the way, she does this feast/famine cycling. She probably does 3 fasts a week, I would say, eating one meal. And she feasts at least two days a week.

But, she also does periodic longer fasts. Extended fast. And with each extended fast, at least 5 days. And she's just doing pure water fasting. About a month later, she gains more muscle. Why is this happening?

I mentioned autophagy. Where your body, in a fast. Especially an extended fast. It starts to eat all of the bad tissue. And that's one of the magic things that happens during an extended water fast. That's the autophagy. Now, what happens on the backside of autophagy is stem cell proliferation. So now your body raises up it's stem cells to replace the tissue, the bad old cells and bad DNA that it ate. One of which is bad protein in our muscle.

So, the body will literally eat the bad protein. Because people say, well, you lose some muscle while you're fasting. You lose muscle, but it's only bad muscle that's not recovering anyway. So then, it raises the stem cells up. And it takes a month or so. But then all of a sudden, you gain new muscle. And this muscle is recovering. And if you know anything about exercise, everything is about recovery. And all of a sudden, she got more muscular. She got more fit. She was able to lose basically more body fat.

The point is that the autophagy, with the elevated stem cells. You get new muscle that recovers faster, and that's not just muscle. That's happening to your internal organs, as well. So the autophagy stem cells is the magic of an extended fast.

Dr. David Jockers: Absolutely. A lot of people are concerned they're going to lose too much weight, too much muscle. But basically that human growth hormone sends that signal to preserve lean body tissue. So that's elevated because it wants to maintain that. So think, from an ancestral perspective, if food wasn't around, we needed to have greater vigor. Greater strength. Greater resiliency so we could go out and hunt. So we could go out and find food. So absolutely.

Dr. Dan Pompa: Yeah. When you understand, it really is just forcing adaptation. Our DNA is set up for it. We're mimicking what our ancestors were forced to do. We're mimicking times of feast. We're mimicking times of fasting. When they had it, they ate it. They didn't count calories. They didn't count carbs. When they had it, they ate it. But when they didn't, environmental stressors, droughts, whatever it was. They were fasting. They were forced into fasting states.

What happens, there are, I like to say 7 benefits. Especially from extended fasting. Number one is we do get the autophagy. We're eating the bad stuff in our bodies. Number two is the stem cells that raise up and heal things. When you're going through an extended fast, it's pretty neat. Because every fast that I do, and I fast at least two or three times a year.

I have something like, oh, it hurts right here. And then I remember, I injured that years ago. It's like, what's happening is the body is literally retracing. Going back. And stem cells are really healing that area because of the fast. So the body goes and retraces through the healing.

Something else I like to call energy diversion happens. Meaning, if you realized how much energy it takes to digest and assimilate food, it's massive amounts of energy. Your innate intelligence, when every meal you eat. Every time you eat food has to take that energy and say, we're going to do this at the digestive level. The intestinal level. The cellular level. It's massive.

So when you take that away, the energy is now diverted towards healing. I'm telling you, the innate intelligence. We're chiropractors, right? Chiropractic adjustment releases that innate intelligence. A fast harnesses the innate intelligence, takes the energy that it would normally be using for digestion and assimilation, and it is able to utilize that and focus on healing. And it has the stem cells to do it. That's the cool thing.

Folks, stem cells, I may have spoke out of turn that y'all know what stem cells are. But if I cut my hand, the reason the skin comes back together and makes new skin. You think, how does that happen? The would could have been gaping. And yet it will form new skin. Stem cells do that.

Here's the problem. The older we get, the less viable stem cells we have. But it didn't form eyeballs right here, it formed skin cells. The innate intelligence knows to form the right stem cells.

So by periodically doing fasting, we're breaking down the bad and we're upregulating viable, young stem cells that our body produces. People pay a lot of money to do stem cells. Your body produces them for free during a fasting state. So anyways. That's the third reason. The autophagy, the stem cells, the energy diversion. Also what happens is you reset DNA. Literally. You turn off bad genes, and you turn on longevity genes, and anti-inflammatory genes. That's huge.

Another thing is you reset your microbiome. It gives you a chance to fix your gut. You're not putting food in it. The microbiome, literally, that's your good and bad bacteria. It resets. So it's very, very important as far as if you really want to fix your gut. Fasting, I believe, is the most powerful tool that we have.

And of course, I mentioned the hormone optimization that occurs. You do get the growth hormone rise, as you mentioned. You also get, your cells get very sensitive to the hormones you have.

So all of these things are really part of. And you get the elevated ketones. I would say that's the seventh one. You get these super elevated levels of ketones that we know heal the body. So 7 reasons why you should fast right there.

Dr. David Jockers: I get so excited when you start going through that, just how powerful the body is. Again, like I've been saying throughout this summit, it's really the most powerful, inexpensive, it's ancient, obviously. Our ancestors have done it. Really, all of mankind has done fasting. It's part of our genetic blueprint. So it's powerful.

As far as doing an extended fast, what do you recommend as far as the length. And when do we really hit the autophagy. Obviously, even during

intermittent fasting we're getting some autophagy taking place. When does it really ramp up, and same with the stem cells?

Dr. Dan Pompa: Yeah, that's a great question. It takes about three days for most people to fat adapt. And if you do this stuff more frequently, I can be in that state in a day. But it takes time to get there. The average person, it's about three days when you start fat adapting.

So I always say the minimum, if you're going to do an extended fast, is four days. Because the first three, you're not even hitting the big benefits yet. But by day 4, the autophagy. Because now you're burning mostly fat as energy. Number one, your hunger disappears. So it's a lot easier day 4, so hang in there. Now you're experiencing the highest levels of autophagy. And if you can go one more day, 5 days. You get a very high level of autophagy occurring. And the highest levels of stem cells start occurring, there's a peak that hits around that day 5.

So, five-day fasts, four days a minimum I think is a sweet spot. Can bigger people, heavier people, benefit from longer fasts? Absolutely. A big fan. They can benefit longer term. But the average person, I think if you think in terms of five days. I think magic happens around that 5-day mark. And, I'll tell you. When you look at studies on some of the hormonal shifts that take place, there's another reason to do a 5-day water fast.

And you asked another question, some of the tricks. For the average person, I can just do a fast and I don't have to worry about electrolytes and minerals. But if you're new to it, electrolytes are going to help you. I don't mean take electrolytes that you would buy in the store with sugar in them.

Sea salt actually helps you maintain potassium. But some people need a little extra magnesium. If you're cramping, getting muscle cramps. Take some extra magnesium. Sea salt is a big, salt water. It tastes like soup when you're fasting. It's a big benefit. I think that's going to benefit everyone.

Here are the questions I typically get: Dave, can I take my supplements? I tell people, try not to. I don't like to push the body left or right. I like to rely completely on the innate intelligence. Electrolytes, that's different. It's not pushing the body one way or another. But herbal products can.

There's a product called bind that stays in the gut that can minimize some of the detox symptoms that people get. I would say that's ok. There's another one, it's molecular hydrogen that you're familiar with. It downregulates a lot of the hydroxy free radicals. It's a redox, it doesn't push left or right. That can help some people. But all in all, as simple as water.

And we can talk a little bit about partial fasting, which I'm also a fan of. Which is a completely different type of fast. Right now, I'm talking specifically water fasting.

Dr. David Jockers: Absolutely. So water fasting. How about dry fasting? I know you've experimented with that, as well. What are your thoughts on that?

Dr. Dan Pompa: Many religious cultures do dry fast. Typically for 24-hour periods. Which, if you're going to start that's where I would start. I would recommend doing some water fasting first before dry fasting. But the kind of cool thing about dry fasting is your body needs water to survive. Where does it get it? It's going to get it from these bad cells.

So you get about a 3-1 autophagy. Meaning you're going to get three times more autophagy. Therefore one day of dry fasting arguably could equal three days of water fasting. I don't know if that works out, exactly. But if it is 3-1 autophagy you could make the argument.

The bottom line is, you're going to break down bad cells very quickly because your body needs water to survive. My son did about 3.5 days dry fast. He did what is called a hard dry fast. And I didn't tell him to do this, he just did it on his own because he was reading about it and got excited. But anyway, a hard dry fast is now showering, basically nothing. Because your body, it's so intelligent, if you shower it will literally suck the water right through your pores. Again, all in the name of survival.

But I had, ironically enough, I'm with him today. It's a past client of mine who is very, very sick. Who was forced to fast. He didn't choose it. He fasted 12 days on just air. Dry fasted. But it ended up being the thing that saved his life. He literally couldn't drink water. He couldn't even handle the IV. They were trying to give him things, his body was rejecting everything that they gave him.

He didn't drink any water. 12 days. That was the longest I've heard. But people have probably gone longer.

Dr. David Jockers: That's so amazing, that just, we're always trying to add something when somebody is sick. So basically you just didn't do anything, obviously no water, no food, no supplements. Probably no medications here, as well. 12 days.

Dr. Dan Pompa: Yeah, it saved his life. Ironically, I'm here with him now. His body is brilliant and he's better now. And he does a lot of research for me. But he was that sensitive chemically that literally, he was dying. So it wasn't like he said, I'm going to dry fast. But yes, it saved his life.

And I've seen that with water fasting, as well. Where people are almost,

the body know what it needs to do. But oftentimes just eliminating, again, that energy diversion. Taking the energy and just driving it, driving the innate intelligence is what saves people's lives.

Dr. David Jockers: Absolutely. So as somebody gets started in fasting, what are some cautions you typically give people? What are some of the entry steps to do it, and things to look out for?

Dr. Dan Pompa: You have to, if you're on medication, you have to work with your doctor. Because you're going to need far less of whatever medication. Because your cells are that attune. So if you're taking insulin, my gosh, you're going to need so much less or you're going to be in trouble. Thyroid medication. Anything. Antidepressants.

I had a gentleman, it was probably three seminars ago. He was a patient of one of my doctors. He came to give testimony. He was on 120 days of a pure water fast. Here's the testimony. He was on 8 different medications. He was working with his doctors. A couple of psychotropic drugs. So many different medications that were most likely some of the more needed, because he was that unhealthy.

But as he went through the fast, every one of his nutrition markers normalized. All his inflammatory markers were through the roof. He was in a state of death. He was obese, obviously. And at this time, he was off of every one of his medications. And all of his nutrition markers were normal. 120 days on just water.

Dr. David Jockers: Unbelievable.

Dr. Dan Pompa: Yeah. But you should have seen him. He lost slightly over 100 pounds. From what I've heard, to this day, he's still doing fantastic.

Dr. David Jockers: I believe it. I remember my first year in practice, I had a guy with ulcerative colitis. 10 years. Living in his mom's basement. Couldn't work. Couldn't go to school. Tried every diet plan. GAPS diet, low FODMAPS, all this stuff. Wasn't getting better.

And then all of a sudden he was like, I'm just going to fast. And at first, that was kind of my first experience with a long fast. I'm like, great, let's do it. Let's do a 7-10 day fast. By day 5, he was like, this is the best I've ever felt. I can't remember feeling this good. He ended up going 42 days fasting.

And then he got down to 119 pounds. He's 5'11", 119 pounds. So it looked like he came out of a concentration camp. But then he started eating, started exercising, and three months later he was 170 pounds of muscle. No ulcerative colitis. Had his life back. So powerful.

Dr. Dan Pompa: You know, honestly, the doctors that I coach echo the same. I don't know that we could get the conditions that we see well without fasting. It is such an unutilized tool. Because there are so many myths about fasting. I'm going to lose my muscle. I'm going to starve. You can go down the list.

My next seminar, we have Dr. Jason Fung. I don't know if you've interviewed him.

Dr. David Jockers: Yeah, we're interviewing him.

Dr. Dan Pompa: He's a great guy we work closely with. I love the man. He talked about a lot of the myths. I'm sure, ask him about the myths. I think he does a great job knocking it down. He's a nephrologist, University of Toronto. Why would this guy get involved in fasting, he doesn't have to. Because he got fed up with the failures of medicine, and he realized fasting.

I think it really happened, like you said. Some of his patients were coming back and going, yeah, I fasted. And he's like, holy cow your insulin and glucose are unbelievable now.

So he stumbled into it, like I think so many of us do. But it's unutilized. It's a remarkable tool.

Dr. David Jockers: It is. And I just want to really commend you for being one of the pioneers in getting it out. Because you've been really on this, really like the last 10 years you've been talking a lot about fasting. Especially over the last few years. Really have gotten the message out on YouTube, on your podcast, really all over the internet. You're training doctors on it. You are an inspiration to many.

So, Dr. Pompa, what are some final words of inspiration you can leave our listeners with?

Dr. Dan Pompa: I think that it's what you said. It's not necessarily adding something that's going to be your miracle. It's taking things away. Even so much as taking all your food away. And giving your body time to heal.

And I said there's something called partial fasting, which is great, too. Where you just diminish the amount that you eat for five days a month. And the studies there, it's just remarkable. But I think we live in a society right now where we're overfed. Even on healthy foods. I watch people just absolutely overeat.

And I'm not telling anyone to count calories because I don't believe in that. I have a saying. "If you want to live longer healthy, the key is not eating less. It's eating less often." And there lies the magic. When you

look at ancient cultures, they don't count calories. They don't eat half their meal and push it away. No, they just eat less often.

I've been to one of the last hunting-gathering tribes. And they ate one big meal a day, pretty much. So when you look at studies on living longer, there's only one thing that really holds up. And it is eating less. But you have to do it by eating less often. So there you have it.

Dr. David Jockers: Love it, man. There he is, the man, the myth, the legend. Dr. Pompa himself, the fasting guru. So check him out, drpompa.com. *Cellular Healing TV*, great show. You can find it on YouTube as well as his podcast there. He talks a lot about fasting he does guided fasts, as well. Which is really cool. You've got a group' what's the name of your group for fasting?

Dr. Dan Pompa: They can join it. If you go under announcements, there's the videos. But it's fasting for a purpose. There are 12,000 people there sharing information. And again, go under announcements for fasting for a purpose. Join us, because there is power in numbers. You get so inspired by the stories and the healing and questions. And I do a video every day during the fast. For a month up to it, I do one a week. So check it out.

Dr. David Jockers: Really good stuff. And I think that's really what it's all about, fasting for a purpose. We have a big enough purpose, we can withstand the sacrifice and really get the results on the back end.

So, for all the listeners out there, I just want to remind you that fasting has the ability to unlock the dormant healing potential within you. It's safe, it's powerful, and it just might transform your life. So try it out, and we'll see you soon.

Fasting Strategies for Weight Loss & Metabolism

Guest: Dr. Jason Fung

Dr. David Jockers: Well, welcome, everybody, to the Fasting Transformation Summit where we are uncovering the most ancient, inexpensive and powerful healing strategy known to mankind: fasting. I'm your host, Dr. David Jockers.

And today, we're going to talk about alternate day fasting strategies for chronic disease. And I brought in one of the top experts. He's actually got two bestselling books where he really goes into detail on fasting. He's all over YouTube. And you can find him; just type in "Dr. Jason Fung" on YouTube. You'll see all these amazing videos of his. And we brought him on today to talk about alternate day fasting and really go into a little bit more of the history of fasting as well.

So Dr. Jason Fung is a Canadian nephrologist, which is basically a kidney specialist. Dr. Fung graduated from the University of Toronto and completed his residency at the University of California Los Angeles. He lives and works in Toronto, Canada, where he co-founded the Intensive Dietary Management Program.

He's a world-leading expert on intermittent fasting and low carb, especially for treating people with type 2 diabetes. And he's the author of the bestsellers *The Obesity Code* and *The Complete Guide to Fasting*. He has pioneered the use of therapeutic fasting for weight loss and type 2 diabetes reversal in his IDM Clinic. And you can find his website IDMPProgram (that's just all one word), IDMPProgram.com. And also he's featured on the DietDoctor.com.

And so, Dr. Jason, thanks so much for being on the Fasting Transformation Summit with us.

Dr. Jason Fung: Thanks for having me. Great to be here.

Dr. Jockers: Absolutely. And so I'm curious in how, as a nephrologist, you really got involved with fasting to begin with.

Dr. Fung: Well, the most common reason for kidney failure is type 2 diabetes. And the thing about type 2 diabetes—it's really a reversible disease. But it's not taking drugs that really reverses the disease. If you take drugs, if you take insulin, really you're not going to get a lot better. In fact, you just wind up taking them year after year. And every year you go to the doctor, you get more and more drugs.

However, everybody already knows that if you lose weight type 2 diabetes almost always goes away. So if you have a friend who loses weight, you can almost bet your bottom dollar that that diabetes will get better or go away completely. So it's not a chronic and progressive disease like we've been told. It's really a reversible disease. But you've got to focus on what's important which is not giving drugs, which is using the diet to affect weight loss. And that's really where I started.

So I became very interested in the question of weight loss and looked at it from a physiologic standpoint because the thing about it is that weight loss—there's all this talk. There's no shortage of books and talk about weight loss and how to lose weight.

It's big business, Weight Watchers and Jenny Craig and all that sort of stuff. And they're all focused, I think on something sort of not completely relevant, which is the calories. They all talk low calories, calories, calories. But when you look at it from a physiologic standpoint, the body doesn't count calories. It has no calorie receptors. It doesn't know how many calories you're eating.

So if you're taking all this care to count the number of calories and your body doesn't really care about it at all, then why do you think you're going to make a difference? You want the body to do something. And you think restricting the number of calories does it. But the body has no idea what you're talking about. You're talking two different languages. So it doesn't work.

And that's where I really got interested in the notion that it's really about hormones because the body responds to hormones. Our whole body works on hormones. If you're hot, then you sweat. If you're cold, then you shiver and so on. But it's all affected by hormones and our responses.

And in this case, in most cases of weight, it's insulin. And one of the ways to really reduce the insulin is to use something like fasting and intermittent fasting because it's not just about the foods that you eat. It's also about giving your body enough time to digest and let those insulin levels fall back down. Otherwise, you're going to develop insulin resistance which leads to higher insulin and leads to more weight gain. So that's how I came around to it.

When I started fasting, it was this really, really crazy idea. So we started doing it five, six years ago. And boy! You should've seen the reactions of people to the very notion of fasting. "Whoa! You're going to kill people," and all this stuff. It was insane. It's like, "What? You mean the human body cannot survive more than...? Really, it can survive more than three hours without putting muffins in my mouth?" It was really just this crazy idea. And that's nobody had been using it.

But luckily, I know a lot of the physiology. And I also do this a lot in the hospital. So we tell people to do it all the time. We tell people, "Oh, hey. If you're going for surgery, you have to fast. If you're going for colonoscopy, you have to fast. If you're doing fasting blood work, you have to fast."

So it's like, "Okay, it's no big deal. Your body can handle it no problem. So why can't we use this as a therapeutic measure? As something we can use for weight loss, for type 2 diabetes?" And I thought, "There's actually no reason why you can't." It's just that we've all been so accustomed to all these people telling us that, "You have to eat. You have to eat. You have to eat. You have to eat."

And then it's like, "Oh, I wonder why I'm so fat."

It's like, "Maybe because you're eating all the time." It's like, "Give yourself a break. Just do something simple as giving yourself a period of fasting every day or, if you want, extend that fasting."

Dr. Jockers: Yeah, absolutely. And so when you got started with this, especially with diabetic patients, were you getting a lot of kickback from people? How compliant were people?

Dr. Fung: Well, I have an advantage because they know me. And they trust me. And they know that I'm looking after them. They know that I'm following them. I tell them, "Look. If you're not feeling well, of course stop it. And then come back." So people did trust me because I was their physician. Whereas, they were getting a lot of flak from the people around them, saying, "Oh, you can't do this. You can't do this. That's crazy." Their doctors, their dieticians, their friends would tell them that you can't do this. But on the other hand, I was treating them.

And then after a while, they saw the results. They say, "Hey, look. If I do this, my sugars come down."

It's like, "Well, of course. If you don't eat, your sugars will come down. And then you don't have to take so much insulin."

And they're like, "Yeah, that's pretty logical."

So we started this in about 2012 or something. We got these incredible, dramatic results. We actually just published a case series. We had three patients we published in *BMJ Case Reports*. And in these three patients, they had been diabetic (type 2 diabetes) for 10 to 25 years. And they were all on insulin and other medications. And some of them were on five years of insulin.

And within five to 18 days, we actually took them off all of their insulin. And yet, their blood sugars stayed the same. In two of the three cases, we took them off all their medications. The other one came off three out of four medications. So dramatically reduced the number of medications they took.

They all lost weight because, again, if you don't eat, you'll lose weight. It's like, "Is there anything more basic than that?" But we showed that we could really use this in a therapeutic manner and reverse these people's diabetes because you have to understand that if you are taking less medication but your blood sugar is the same, then your underlying disease is actually much, much better, which means that it's reversing, which is what we knew anyway because everybody knows that.

A lot of doctors, especially in diabetic associations, pretend that this is not possible. It's like, "What do you mean, 'It's not possible?'" Everybody already knows that it's true. Bariatric surgery, for example. We've done all these studies where people lose weight through bariatric surgery. Diabetes almost always goes away. So we know it's reversible.

It's not the disease. It's the treatment of the disease that's completely wrong. That is, we're using all these drugs for a dietary disease and wondering why it didn't work. And then when it didn't work, the Diabetes Association would say, "Well, that's just the way that the disease is."

I'm like, "No. It's because the treatment is all wrong. You've got to focus on the diet. It's a dietary disease. Focus on the diet. You may or may not succeed. But at least consider using these other options, including fairly intensive options like fasting."

Dr. Jockers: Yeah, absolutely. And I've been saying throughout this summit that fasting is the most ancient, inexpensive, and most powerful healing strategy. And so I know you know a lot about the history of

fasting. A lot of people—Plato talks about how he fasted for physical and mental efficiency. Can you go into a little bit more of the history? I know you've talked about that in a lot of your books.

Dr. Fung: Yeah, absolutely. And some of the smartest, most influential people in the world were huge proponents. So you go back to say, religion, for example. And almost every single major religion in the world, you see fasting all throughout. So whether it's Catholicism, Judaism, Buddhism, Hinduism. You could go on and on. I don't think you could actually find a major religion that doesn't have fasting as part of its core beliefs. So you know that people have been doing this for thousands and thousands of years without any problems.

And then you get into the ancient Greeks. So people like Hippocrates were big believers. And then you get into the modern American era. You have Benjamin Franklin and Mark Twain and people like this. And they'd have quotes like, "The best of all medicines is resting and fasting."

So Benjamin Franklin, interestingly enough, was governor of Pennsylvania or something at one point. And he actually tried to make one day of week mandatory fasting day. He didn't succeed. But he tried because he was such a big believer in it.

Dr. Jockers: That would cut down our healthcare costs quite a bit.

Dr. Fung: I know. That actually was a pretty good idea. But obviously, it's hard to tell people what to do. So anyway, it didn't fly. He's lucky he wasn't lynched for it. But he was such a big believer. And it's like, "Okay, these are some of the smartest people in history." Benjamin Franklin. It's like, "Whoa! This guy is a genius." Mark Twain, very, very smart.

And so you see that throughout history people have accepted this. So it's been used for thousands of years. It's literally the oldest dietary intervention in the book because there are other dietary inventions. There's paleo. And there's keto. And there's veganism and stuff. But they don't go back 5000 years. You don't go back to at least 2000 years, the time of the ancient Greeks and so on. So this has been there. It has worked. It's been done without any problems.

And people always say, "Oh, the people will never do it." It's like, "You know people have literally been doing this for the history of the world?" It's like you're saying that people could do it from all the way up until, say, 2018. And in 2018, it's impossible for humans because our physiology has changed. We need to eat every three hours. It's like, "No, the human body is the same as it was in the time of the ancient Greeks."

So this is one of those things. We're not trying to reinvent the wheel. We're not trying to say, "Oh, I've got the latest and greatest," because

these are the things that are always crazy to me. You can come up with some kind of miracle food whether it's a berry or green coffee or raspberry ketone or whatever it is. And you can sell it.

And it's like, "Okay, so here's the thing. What are the chances that smart people all over the world have somehow missed this miracle berry from the Amazon for thousands of years, and since 2015, we've discovered the secret to life?" I don't think so. If there's a secret to life, I think we would've discovered it at least a thousand years ago.

And it's like, "Okay. That's funny because 2000 years ago, minimum, every major human religious group, figured out that, 'Hey, fasting is pretty good for you.'" Every once in a while if you fast—and that's where the word breakfast comes in; it's the meal that breaks your fast. You should fast every day—is kind of healthy. There's a time you should eat. And there's a time you should fast. And that's really the basic cycle of life.

Every once in a while, you do a longer fast to cleanse the system. And that's what almost every group of humans in the history of the world had come up with by themselves that this was something that was really good. And it's like, "Yeah. Hey, it's one of these ancient secrets." It's been there for this whole time. But it disappeared in the last 30, 40 years.

And I'll tell you what happened. In the 60s and 70s, they did these crazy fasting studies. You read them now. And you're like, "Wow! I can't believe they did that to people!" And remember at the time, they were worried about world hunger. So if you remember the Malthusians and stuff.

In the 1970s, we were actually talking about two global calamities. One is world hunger. And two was world cooling. World cooling never happened. Now, we have global warming because, at the time, interestingly enough, they thought that the dust particles in the air would reflect the sunlight, and we'd have another Ice Age. So *Time* magazine had this great cover with a penguin on it. That's didn't happen.

And the other big worry was the rising human population. And we're not going to be able to feed ourselves. So both global warming and obesity as a global issue took us by complete surprise. Nobody was expecting it. We all expected the opposite.

And they did these studies about fasting just to see what would happen. And they'd fast these people who were not even obese for 60 days at a time. It's like, okay. That's not a very good idea. But at the time, you've got to remember, they're trying to see what happens to a human body under these conditions of extremely low food.

So they're looking at things that are different. So they're taking guys who

weigh 140 pounds and making them go two months without eating, which is totally different than giving a guy who's 300 pounds with type 2 diabetes no food for 24 hours. They're completely different!

And so there are a bunch of problems that came up with those people. Some people actually died. It was pretty bad. But those were what you'd say now are fairly extreme conditions. So it's much different, two months of fasting versus 24 hours.

So what we're talking about these days, which is more intermittent fasting, is much shorter. So the risk is much lower. All these things that the people died of, which is something called refeeding syndrome, doesn't exist. You'd really need to go more than five days without. So now, we're more focusing on frequent, short term fasting; alternate daily fasting; that sort of thing as opposed to these long, drawn out fasts which was the rage back in the 60s and 70s. That's why everything fell out of favor.

And then we started talking about, "Oh, you shouldn't eat three times a day. You should eat 10 times a day." That wasn't a good idea either.

Dr. Jockers: Yeah, absolutely. And they say that because they feel like it stokes our metabolism. But like you were saying, we've been fasting or practicing fasting far longer than we've been practicing eating five, six meals a day or whatever it is that people do.

And so really, I know that fasting actually improves the metabolism. Can you go into some of the hormones and how that works?

Dr. Fung: So this all pure physiology. And this is one of those situations where people repeat something often enough. And then since everybody is saying it, people think it's true.

So both the "Oh, you stoke your metabolism." There's actually no science behind it. There are no studies behind it. And if you think eating all the time is going to make you slim, go ahead. Try it. Did it work for you? It's like, "Well, I think I know the answer to most people." Yeah, sure. Some people are going to do fine with it. But there are a whole lot of other people who don't do fine eating eight times a day.

But the fasting, they've done a lot of studies on the metabolism. So what they're talking about is the basal metabolic rate, which is the amount of calories you burn at rest. So you're not talking about exercise because exercise is voluntary. This is like the amount of energy it takes to generate body heat and keep the liver and the kidneys and the brain working in a relatively normal fashion.

And what's interesting is that if you take somebody who is fasting for,

say, up to four days and measure their metabolic rate at the beginning and at the end, you'll see that the metabolic rate is actually 10% higher at the end of four days of not eating.

And that's because you have something called a counter regulatory hormone. So when you eat, insulin tends to go up. When you don't eat, insulin falls. But then there are other hormones which run counter to that. So they're opposite. Insulin falls. And these other hormones go up. So it's a sympathetic tone which is our fight-or-flight response, so something that's energizing. Noradrenaline goes up. Free fatty acids go up.

So again, as you're depleting your body of the sugar, it's sending out fatty acids so that you can have a source of energy. So some people worry about that. But that's actually a natural, normal response.

Cortisol does go up. So if cortisol is your problem, fasting is a stress on the body, of course. But just like exercise, low amounts of stress is actually good for you. That's the principle of hormesis.

So those are the counter—and growth hormone. Growth hormone is also a counter regulatory hormone. So those are what keep the metabolism raised up—the adrenaline and so on. And then the growth hormone is there. And it keeps your lean mass.

And everybody says, "Oh, you're going to burn your muscle." Again, no evidence that that's true. And they've done lots of studies. And a lot of people point to the fact that, "Hey, if you just look at the period of fasting—" and somewhere around 24 to 36 hours, you get this period where you break down protein to generate glucose. And they say, "Well, you're breaking down protein. That's so bad." But what they don't understand is that if you look on the other side, what happens when you eat again? Your growth hormone is through the roof. So you rebuild those proteins.

So what you're doing instead of just breaking down protein is that you're actually breaking down protein then rebuilding what you need which is very powerful. And in the five, six years that we've been doing this, we actually haven't sent a patient for skin removal surgery. And we have pictures. We have pictures of people who've lost 100, 120 pounds. And they're putting their pictures up.

I was just talking to a fellow who had written to me. And he was saying he had lost some weight. And then when he started fasting, he noticed that all of his skin was changing. And it's like, "Oh, that's fantastic." And then it all tightened up because the body is smart. If you don't need protein, you're going to break it down. But that's a good thing. It's not a

bad thing. And then you rebuild it.

So this also gets into the topic of autophagy which is something that fasting is very good for, which is, again, this process of breaking down old protein and rebuilding them. So it's a renovation cycle. It's actually rejuvenating, almost an anti-aging sort of process as opposed to leaving the old protein there which, when you do that, you have all this excess skin that never got metabolized or catabolized, which is broken down for energy. And then you have to use surgery to cut it down. But that's really bloody surgery. There are a lot of blood vessels. There's a lot of [inaudible].

Remember when you're taking out the skin, you're not taking out a lot of fat. That's all protein. It's all connective tissue. It's all skin. All that protein has to go if you're going to look good. Otherwise, you're going to have flaps everywhere.

So those are some of the things that happen during fasting that are really beneficial. Keeping your metabolism high, breaking down the protein, autophagy—there are so many benefits to this. The Ancients knew it. And we're just catching up with our science now.

Dr. Jockers: Yeah, absolutely. And so as people start going into, let's say, an alternative day fast and they're normally eating, let's say, three meals a day and they get to breakfast or lunch, whatever meal it is, what happens with their hormones? A lot of times people will feel hungry around the meal time. But if they can just drink some water, just pass through that period of time, it seems to go away. And can you explain that in more detail?

Dr. Fung: Yeah, so this is what we tell people in our Intensive Dietary Management Program. You have to expect that the hunger doesn't continue to build. So everybody worries that, "Oh, yeah. It's 12 o'clock. I'm skipping lunch. I'm going to get so hungry." You are hungry. So we prepare for it. But it comes in a wave. As it passes, it goes away.

So if you measure something called ghrelin, which is the hunger hormone, over 24 hours, what happens is that the ghrelin goes up at breakfast, lunch, and dinner. So there's a learned component to it. But then if you don't eat, ghrelin actually just falls back down to baseline.

And the bottom line is that if you've ever worked through lunch, you know this very well. At 12 o'clock, 1 o'clock, 1:30, you're pretty hungry. But by the time 4 o'clock runs around, you actually feel the same whether you ate or whether you didn't eat. There actually is no difference. The ghrelin is back down to baseline. Your hunger level is back down to baseline. So both the physiology and the clinical experience show this.

And that's one of the big worries, probably the biggest worry of people—that they'll just be so hungry they can't deal with it. But if you know that it's only going to be an hour, an hour and a bit, have some tea. We tell people, "Have some water. Have some green tea or something like that. And then just ride out the wave." And they can do it. If they think it's going to just keep getting worse and worse and worse and worse, they have no hope.

And I have done this many times where not necessarily deliberately, but I've been so busy. And it's like, "Oh, I'm really hungry. It's 12 o'clock. But I'm so busy." So I just keep working. And then it's like, "Okay." Well, by the time it passes, it passes. And it's done. And then you don't think about it again because, again, you're just busy.

So staying busy is actually one of our really important strategies for making it easier, especially around meal times. So if you're used to sitting down every lunchtime, then it's going to be tough. But you all of a sudden think, "Okay. Well, why don't I just keep working and then go home an hour early?" Yeah. Hey, that works. Now, you're building that fasting into your schedule.

And the great thing about it is that when you're doing these alternate daily fasts, short fasts, it's not difficult in a working day because if you don't eat breakfast, mostly people don't notice. If you don't eat lunch once in a while, mostly people don't notice. Skipping dinner is sometimes a bit harder because it's family time and all this sort of stuff. And that's why a 24-hour fast, dinner to dinner, is often very easy to slip right into a working schedule without even anybody knowing particularly that you're even doing it.

Dr. Jockers: Yeah. Yeah, absolutely. I do that regularly. I do actually three days a week where I do a 24-hour fast. And then the rest of the week, I'm doing two meals. And I actually feel great. I feel really fantastic, maintain my muscle mass. And I just feel really, really strong. So it definitely does work.

And I know in your IDM program and your books, you've been a big fan of this alternate day fasting protocol. Why can that be so effective?

Dr. Fung: Well, I think it's really a matter of what works in this modern schedule. So alternate daily fasting 24 hours is, as you say, very, very easy to slip right into this normal, Western, professional lifestyle. We go to work. We come home. That kind of thing.

Obviously, it's more difficult if you have shift work or whatever. But nevertheless, that's one of the things. And if you do it on a regular basis, then it just becomes a habit.

And forming habits is really important because it puts your mind into autopilot. So it's like you don't even have to think about, are you eating? Are you not eating? You just slip into the habit. So it's no longer willpower. It's just baseline.

So if you skip, say, breakfast. And I'm not saying that skipping breakfast has anything magical about it. It's just that breakfast is usually the easiest meal to skip for a couple reasons. One, everybody is in a rush to get to work. And it just takes a long time to make a proper meal. So people usually eat toast and stuff. And that's just not that good for you. Or get a muffin. And that's just not that good for you. So it's the easiest.

And then once you get used to it, it's like you don't even have to think about it because it's like, "I'm so used to it." I just have a coffee. Even on days I could eat breakfast, I don't.

And once in a while, I do. So the other day, I thought, "Okay. I'll have breakfast." And I was a little bit hungry. But I was meeting some people. So like, "Yeah, I'll have breakfast." And then I just felt actually really off because I'm like, "Whoa! I am way too bloated right now," the whole day.

So forming these habits is important because it means that you're no longer having to exert willpower. You only have so much willpower to use. So if it's just automatic, that's great. And that's where these alternate—and if you skip breakfast on a regular basis, then it's just skipping lunch every so often, which again, doesn't become so hard.

And if you build it into your schedule, like, "Okay, Tuesdays, Wednesdays, and Fridays are my busiest days. So those are the days that I plan to go right through." Or this podcast. I build that right in. And then I go down to the hospital to do the rest of my work. And it feels like a normal day. And I've not had to consciously say, "Okay, this is a fasting day. I'm going to grit and bear it and stuff." It just flows right in. So that's how it works.

And it's nothing magical. You can do a seven-day fast and derive the same benefits as seven days of 24-hour fasting. But it's much more disruptive to a schedule, much more disruptive to this habit formation. And that's why it works for some people. It doesn't work for other people. But it works for some people.

As you get into the 36-hour fasts—and again, for type 2 diabetes, we tend to go a little bit longer in the IDM Program for type 2 diabetics just because they have a more severe disease and because we want to reverse that disease before they develop a lot of end organ damage. And again, 36-hour fast is a little bit more disruptive because now you're skipping breakfast, lunch, and dinner. But on the other hand, you derive a greater benefit from it.

But again, it's not that long that you really have to worry about things like refeeding syndrome and other really arrhythmias and all that sort of thing that you see in the longer fasts.

But we use all of them. We use intermittent fasting. We use extended fasting. It really depends on the individual. But alternative daily fasting is just one of these things that is easy. It's a lower level of fasting that a lot of people can do. Even we have 75 year olds and 78 year olds. And they can do it no problem.

Dr. Jockers: So do you guys just tell them, "Okay, here are the different fasting strategies; pick whichever one you want to start with"? Is that how you guys...

Dr. Fung: We usually talk to people and then make a recommendation. But if you've never done any of them, then you don't really know which one you want. So we usually start with 24 to 36 hours depending on the situation. If you're older, we'll go a little less intensive. If you're younger and sicker, then we'll go longer. So it all is individualized.

And then after that, you work with people to do. So we have counselors who will work with them. And the main thing is support. So we put people into groups in our IDM Program to get that peer support for the fasting because it's not fun. I'm not saying it's fun. I'm saying it's something that can have a lot of health benefits. But I'd rather eat pizza and donuts myself. So it is something that we should try to support and make easy. And we tell people what to expect and how to deal with hunger, the waves of hunger and so on and what you can use.

Green tea, for example, is something that we recommend a lot. There are some antioxidants in there called catechins, which are thought to be very good for appetite suppression. So green tea works very well because you've got antioxidants. You've got some appetite suppression. There are zero calories, zero sweeteners. So hey, that's perfect.

So there are fasting teas out there that we recommend, one made by Pique Tea, for example. I helped them develop a line of fasting teas to just give you a little bit of support because it's something that, if it's difficult, then we have to support people, just like when people go through chemotherapy. We don't just throw them at it. Or surgery. We don't just say, "Oh, here's surgery. No anesthesia for you." It's like, no. That's not helpful.

It's like, "You need surgery. But let us do everything we can to make it easy. So we'll give you general anesthesia. We'll give you pain medicine, anti-nausea drugs, and all this sort of stuff."

It's the same idea. This is what you need, which is fasting. Let us do what

we can to make it easy for you so you can derive the benefits, whether it's weight loss or type 2 diabetes.

Dr. Jockers: Yeah, absolutely. And I've found that fasting is like exercise. You've got to build the fasting muscle. When I first started fasting, it was really hard. It was daunting, mentally and physically. And then after doing it for a week or two, it became so much easier.

Dr. Fung: Yeah, we tell people that, too. And that's what they need to hear. It's just like running, for example, or weight lifting. If you've never lifted weights and then you start and do a lot of weights and you're so sore, you're like, "Whoa. This is really bad. Look, my muscles are so sore. This is the stupidest thing."

No. It's like, "You've got to expect that." And we tell people the same thing. You know what? The first couple of weeks are going to suck. You're not going to be used to it. The hunger is going to be high. You're going to have a lot of trouble. But you have to try to just get through it. You can do one of two things. So we do talk to you. You can either build up gradually. Or you could try going to a very low carbohydrate diet and then fasting, for example. So when you do that, of course, it makes it easier because your body is actually used to using dietary fat which is the same metabolism as body fat. So whether your body uses fat that you eat or fat from your body, it's actually the same metabolism. So doing that can make it a lot easier.

Or you could just jump in and do a three-day fast or a five-day fast and just get your body used to it in a hurry. And I always say it's like a pool. There are some people who like to go in the shallow end. And other people will cannonball in the deep end. One will work for one person. Another will work another person. And some people, you cannonball in the deep end, you just go in, dive in, and just do it and then suffer through. It works pretty well for a lot of people. And then after two weeks—I say, "Always give it a couple weeks because you can't tell if this is something you're going to be able to do. Don't give up after the first three times because it is going to be hard."

Dr. Jockers: Yeah. Yeah, that's having the right mentality going in. Now, I know you work with a lot of diabetics and obviously people with kidney failure. So what do you find with electrolyte levels as they fast? Any special considerations there?

Dr. Fung: Not really. Most people do fine. Again, we're not doing these ultra-long fasts that they used to do. But even, I'll tell you, when they did—so the world record for fasting was actually 382 days, which is incredible. Over a year, this guy didn't eat. And they measured his electrolytes and so on. They wrote it up in a paper. And in fact, he had no problems. His calcium levels were normal. His sodium, his potassium. Everything was normal.

And so we don't see many problems with electrolytes. And that's the point. The body is actually designed to use this fat as energy for when you don't eat. So you don't need more electrolytes and stuff.

Of the problems that we do see, some people go a little low in salt and actually get a bit dizzy and so on. So some people will actually take salt and water, for example. For people who are on it longer or whatever, we tell them to use bone broth, which is not truly a fast because that's not water, sort of thing.

Dr. Jockers: Some calories in there.

Dr. Fung: Yeah, there are calories. There's some fat. There's some protein. So it's not a true fast. But again, I'm not interested in being a stickler on, "Oh, you broke your fast." I'm interested, "Are you getting better?" If you are, then, hey, use the bone broth. But that allows you to put salt in because it's hard to put salt in your coffee or salt in your tea. It's weird.

Some people use salt in water. And that's alright. And some people will actually just take some salt.

Magnesium is the other thing. Some people get a lot of cramps and so on. So again, sometimes, a bone broth is helpful because there are a lot of electrolytes in there. And that helps. And the other thing is Epsom salt baths, for example. [That's] something that you can do during fasting that will boost up your magnesium levels.

Dr. Jockers: Yeah, good stuff to know. And so basically, if somebody is eating one meal a day, kind of like what I do, I'm eating a lot of calories in that one meal. Even though I eat low carb, I'm still getting a pretty good rise of insulin for that one meal. But if I broke that meal into three smaller meals, so you get the same amount of calories, I would have a lower release of insulin each time. But let's talk about the net overall, the amount of—to phrase this question. Just continually spiking insulin three times, let's say, throughout a day or if I were to eat five times as opposed to in a one-hour period of time just getting a big rise and how that would impact the body there?

Dr. Fung: Yeah, so it all comes down to insulin resistance. So if you look at hormones, for example, any hormone in the human body does not stay at a certain level. So if you look at growth hormone, if you look at parathyroid hormone, every hormone spikes up and then goes back down. If it goes up and stays high, what happens in the body is that the body quickly becomes resistant to it.

So it's like if you listen to headphones and you're putting on very loud music. Your body adapts to that loud music by becoming a little bit deaf.

So it's too loud. So you actually can't hear it as well.

So you need not only a high stimulus, but you need that persistent stimulus. And that's the whole point. It's not the same thing. And three is probably fine. So if you go back to the 70s, people ate three meals a day. But remember, they ate at sort of 8 o'clock in the morning, 12 o'clock, 6 o'clock. So 10 hours of feeding and 14 hours of fasting. It's different than nowadays which is like 15 to 16 hours of feeding and 8 hours of fasting. That's a standard of what we're doing now.

So it's the persistence of that stimulus throughout time. And that's why you don't see that in the human body. So everything is pulsatile. All hormones are pulsatile. So again, it's like if you're in a very dark room and you go out in the sunlight, it's not even that bright. But you're blinded because you're so used to the dark.

The body is the same way. If you are constantly exposed to something, the response to it goes down and down. It's the same with insulin. So if you're constantly exposed to high insulin levels, then you're going to become resistant to it. And that's where all the problems start.

So you really have to keep insulin, like any of your other hormones, pulsatile. So you have to have a period of low insulin in order to prevent that resistance. And that's the point.

So I always say, "Think about the story of the boy who cried wolf." So he cries wolf. All the villagers come running. And then he cries wolf over and over. And then they stop coming because they know he's not telling the truth. Well, is the answer to that boy's problem now to cry wolf but a little bit softer? Or is it to stop crying wolf? Well, the answer is pretty obvious.

Our bodies are the same. We have insulin resistance because insulin is crying wolf constantly. So we become resistant to it. Now, if you ask all the experts, they'll say, "Oh, you'll eat six, eight times a day. But eat a little less." That's the boy crying wolf but a little softer. That doesn't make any sense at all.

You need a period of time where you don't cry wolf. Then all the villagers are like, "Okay. He's learned his lesson." When he cries wolf, they all come.

Again, it's the same thing. If insulin goes up, spikes up high and then goes down low for 18 hours or 14 hours—which, remember, 14 used to be the standard—now, you've totally reset your sensitivity. Now, when insulin goes up, it's sensitive again.

So the whole point is that it's not simply the foods that you eat. It's also

the way that you eat them that can impact your hormones. And it's this imbalance of hormones that is leading to obesity. So it's not the total calories. But it's the way it's spread out. Even if you took the same amount of insulin but spread it out versus a single spike, it's a different physiologic response just like every other hormone in our bodies.

Dr. Jockers: Absolutely. Absolutely. And so as we finish up here, what are the biggest mistakes you see people in your program making when it comes to fasting?

Dr. Fung: Well, I think that there are two. One is to fit it into your life. So don't do something like—people start out very enthusiastic. And then they think, "I'm going to change my whole life." No, you don't want to change your whole life. Remember, it's flexible. You can do it whenever you want. So don't go trying to force it in where it doesn't fit because you'll never be able to keep it up.

For example, somebody once said, "Oh, he used to meet his friends every Friday or every Thursday for lunch," or whatever. "And he stopped that because sometimes it'd be a fasting day."

I'm like, "Ugh! You can fast on Wednesday and go have lunch with your friends on Thursday because they're your friends. You don't want to be doing that." It's flexible. You can move it around. So always make sure that this is something that you can do because we're not interested in the short term. You can lose weight with all kinds of things in the short term.

And the other things I'm always telling people is, "You've always got this question. 'Oh, does this break the fast?'"

I'm like, "It doesn't matter." Fasting is about lowering insulin. You're providing a period of time where your insulin is going to fall. So say you have a handful of nuts or something like that. You caved, and you had a few nuts. Your insulin is dropping. And then it's going to blip up a little bit because it's not that much insulin. And then it's going to start falling again. That's fine. You can do great.

So if you're doing great with your sort of cheats—whether it's bone broth or even food or whatever it is that you want to cheat with—but you're doing well, hey, why do I care? I'm not interested in being right. I'm interested in you getting better, reaching your goals.

It's the same with artificial sweeteners. We don't recommend it. But some people say, "Yeah, I do great with them." If you're doing great with them, do it. I don't really care. Don't be a slave to like, "Oh. Well, Dr. Fung said that's not actually a fast." I'm like, "No, no. I don't really care if it's a true fast or this or that." Get what you're looking for. And then decide

what you want to do because everybody is different.

You can give the same diet to two people. One will lose 50 pounds. And one will gain 20 pounds. We know that. Everybody is different. So why would I obsess about following this diet to the letter? You do it. You make some changes. You see what makes you better. And then that's it.

Dr. Jockers: It's good. Good. Good words of advice. And so any final words of inspiration for our listeners?

Dr. Fung: Yeah, I think that the main thing is to understand that this is something that they can do, that people have done. It's just a matter of getting the right information and the right support. And that's really it. And then you can take control of your health because so many people have done so many diets. And they're like, "I don't want to do another diet."

It's like, "But this is, one, something that people have always done. And two, not a lot of people have tried this sort of thing. It's relatively new on the scene." So you might want to just give it a try because it's not only effective (because if you don't eat, you'll lose weight), it's also been time tested that you can actually do this.

So give it a try and see how it goes. As with anything, get the right information. Get the right support. But yeah, give it a try. What do you have to lose? It's free!

Dr. Jockers: Exactly.

Dr. Fung: So it's like, "Come on." It's not like we're trying to sell you thousands of dollars' worth of books and supplements and stuff. We're just saying, "Don't eat for a while." So what do you have to lose? If you don't like it, stop. If you're feeling unwell, stop. Get some information. Get some help. Get some support.

But hey, what if you do great? Well, guess what? You've just changed your life for free with just some information and help from friends.

Dr. Jockers: Absolutely. Well, Dr. Fung, thank you so much for your time. I just want to acknowledge you for all the great work you're doing, breaking down these fasting myths, getting this information out.

I just had a patient in my clinic last month. And I'm a big advocate of ketogenic diet/intermittent fasting. And I'd been telling him this forever. Diabetic patient. He said a friend of his gave him your book. He read your book, started doing alternate day fasting. And he's dropped 50 pounds.

Dr. Fung: That's amazing.

Dr. Jockers: I'm like, well, thank you, Dr. Fung, for helping my patient here.

Dr. Fung: Thank you.

Dr. Jockers: So appreciate you just getting that information out and making such an impact.

And for all those who are listening out there, I just want to remind you, just like Dr. Fung said, fasting has this ability to unlock the dormant healing potential within you. It's safe. It's effective. And it just might transform your life. So it's free. Go ahead and give it a shot.

And if you've enjoyed the interviews in this summit, consider owning the entire Fasting Transformation Summit for yourself. That way, you have lifetime access to all the mp3s, video recordings, transcripts, everything you need. And it's especially helpful if you're starting fasting or if you're going to do an extended fast to listen to interviews like this. Be encouraged. Be empowered. And go out and transform your life and your health. So if you do that, we would be honored. And we'll see you on a future interview. Be blessed!

Top 10 Fasting FAQs

Guest: Dr. David Jockers

Dr. David Jockers: Hey, everybody. I know I've been getting so many questions from the Fasting Transformation Summit. And I just want to thank you guys for all of your involvement. I've been checking the live feed and all the different questions that people have been asking. And I'm just so thankful that you guys have taken the time to be a part of our Fasting Transformation Summit.

And so I wanted to take a moment and do this video to really address as many of these questions as possible and to help you guys as you get started with your fasting journey.

So the most popular question is this. It's this fear of fasting and, "Hey, am I going to feel really awful? Am I going to have die off reactions and things like that as I start to fast?"

And I want to say this. Obviously, it's a case-by-case basis. Everybody is going to react and respond differently. I always tell people to just start with a simple fast. If you've never fasted before, get good with the simple fast, 12 hours between your last meal and your first meal. Drink water when you first wake up in the morning, 8 to 16 ounces of water or more when you first wake up. And then just see how your body feels as you get going here, as you get going with your day. You have different activities. And just extend your fast naturally and intuitively as you go.

Now, if you're going to start an extended fast—you're like, "Hey, you know what? I really want to do a three, five-day, let's say a five-day water fast." Then I tell people, number one, it really depends on what your

fasting muscle looks like right now. So for me personally, I do 24-hour fasts every week. So 24-hour fast is not very hard for me because I've trained my body to do it.

My hardest of an extended fast is actually from, I would say, roughly about hour 30 or so to hour—I don't know. It's probably the full second day is the toughest part. It's when I feel more tired. I feel like I want to eat something. I feel a little bit more deprived during that period of time.

And that's because I don't train that often. I might do a fast like that every three to six months. And so it's not as trained and built into my system. So that's what you've got to understand.

Now, will you feel a little bit dizzy at times? Will you feel tired? Absolutely. This is why I always tell people it's a good idea, especially if you're doing your first extended fast, not to schedule anything stressful. Make sure that you're as relaxed as possible. You're in a place you can rest whenever you need to.

I also recommend you get out, you walk a little bit. Go out to a park. Get in nature as much as you can. Ground your body by going bare feet on grass, dirt, or sand. Maybe getting some really good sun exposure can be helpful. Drink a lot of clean water. Maybe take some electrolytes, like some salts. And all of that can be extremely helpful. And so most people, by going through that, will mitigate any sort of unwanted side effects.

If you are experiencing significant side effects—your heart is racing. You have this massive, pounding headache. You're throwing up or whatever it is. You've tried the strategies that I talk about in the Fasting Transformation Quickstart Guide like drinking water, taking some salts, getting your bare feet on grass, resting, taking a nap, things like that.

If you've tried those things and it's just not going away, you can break your fast. It's okay. You may have said, "Hey, I'm committed. I really want to do this five-day water fast." And you break it on day three. That's okay. Don't get down on yourself.

Doing three days of fasting or even a full 24-hour fast is a remarkable accomplishment. You should be really, really proud of yourself for being able to do that, especially in today's society. It's not easy. So just be proud of yourself wherever you get. Be proud of yourself. Follow the strategies that I talk about when it comes to trying to mitigate side effects.

And again, it's not a terrible thing if you do break the fast because, guess what? You can try doing a fast next week or next month or when you're ready to do it the next time. And you'll be better. You'll get stronger. You'll develop the fasting muscle. And you'll develop a level of fasting fitness.

And you'll be more equipped to do it next time. So that's the first thing I want you guys to know.

Now, here are some other questions that my team wrote down that I wanted to make sure we address. Now, one of the common ones was, "Can I drink coffee?" You may see me looking over here. It's because we have them written on the board there. That's why.

"Can I drink coffee and still get the benefits of fasting?" And that answer, again, comes down to the individual. So if we're talking about black coffee, some individuals can drink black coffee and have no impact on their blood sugar or ketones. Other individuals will drink black coffee. Their blood sugar will go up. Their adrenals will produce a whole lot of stress hormone. And they'll end up with more cravings. They'll end up jittery. They just won't feel as good. So you've got to see how your body responds.

Now in general, what I say is if you're testing your blood glucose or your ketone levels, you drink black coffee in the morning. Let's say it's 7 a.m. You drink black coffee. You can test your blood ketones or your blood glucose around 8 a.m. And within an hour, your blood glucose should roughly be—and I should say, you should test before you drink the coffee—should roughly be about a 10 point difference, pretty close to the same. That's mg/dL [milligram per deciliter] reading.

So if your blood sugar was 80 when you woke up in the morning, you drank coffee, and then it jumped up an hour later and was 100, you're having a bad response to the coffee. If it jumps up and is 85, no big deal. So for a lot of people again, the blood sugar is going to stay around the same.

If you're testing ketones, they shouldn't drop more than 0.3 millimole. So if you tested your blood ketones in the morning and they were, let's say, 1.0, they shouldn't drop below 0.7. Otherwise, you're not having a good response to the coffee. So you'd want to rethink that. It may not be the best thing for you in this particular case. It doesn't have calories. But it may not be the best thing.

And that really goes the same if you're drinking coffee with butter in it or coffee with MCT oil. You can always test these things. Do a pre and post blood sugar or ketone analysis, looking at blood sugar or blood ketones to see what sort of impact that has had on it. And that will let you know how you respond to it. So really good question.

What I find is that most people do fine with coffee. But there are some people who are slower metabolizers. So the coffee can oftentimes cause more of a reaction. Or sometimes they have a sensitivity, so an inflammatory reaction that occurs when they consume it.

Now, the second question. “Can someone take in any calories on a fast and still get the benefits?” This is such a good question. In general, research has shown that when you go periods of time consuming less than 25% of your calorie needs, you can get significant benefits, much of the same benefits that you can get from a straight water fast. Maybe not all of them. I’m definitely partial, when you want to get the maximal benefits, to doing a water fast, maybe water and salt. However, you’re going to get a lot of the benefits.

In fact, Valter Longo and the researchers at University of Southern California have actually shown using the fasting mimicking diet which is anywhere from 800 to 1100 calories. Now 25% of our calorie needs is usually 400 to 600. So 800 to 1100 is more like 50% of our calorie needs. They have shown incredible breakthroughs with autophagy, with stem cell regeneration, with preventing chronic disease, with weight loss, with improving insulin sensitivity with doing a calorie-restricted diet, roughly about 50% of our calorie needs. Again, for their program, it’s 800 to 1100 calories for five straight, consecutive days.

So can you consume calories and get the benefits? You absolutely can. And this is very empowering because if you’re like, “Hey, a water fast seems intimidating,” try doing a bone broth fast. Or do the fasting mimicking diet from ProLon that you can check out as well. Or do a green juice fast. Or do a smoothie fast or something like that where you’re just consuming fewer calories.

You’re still going to get a lot of the benefits. You’re going to take stress off the gut. You’re going to really help your body. So that is really empowering. You don’t necessarily need a strict water fast.

If you’re fasting muscles, your fasting fitness isn’t ready for that or just intuitively you don’t think that you don’t want to do that yet, that’s okay. You can get started with a different style of fast. A lot of people do well with a bone broth fast to start or maybe a green juice fast where they’re using a greens powder or you’re actually juicing real greens in a juicer or a Vitamix or something like that. That’s going to be lower calories.

If you replace one of your meals—your breakfast, let’s say—with a big green juice, you’re going to have a lot fewer calories than you would if you ate oatmeal or something like that. So you’re going to get a lot of those benefits. You could do bone broth throughout the day or for multiple days and get a lot of the benefits.

So again, it doesn’t have to be a water fast. I think water fast is like the upper, the top level, the platinum level. But you know what? You can do one of these other fasts and get tremendous benefits and really help heal and restore your body. So don’t be concerned that you just have to do a water fast or you can’t consume any calories.

A lot of people feel good. They'll have a fatty coffee where they've got coffee with MCT oil and grass fed butter in the morning. And they feel really good. I do that sometimes. And I feel really good, really, really productive. And they took in some calories. But they're still getting a lot of the benefits of fasting.

So again, is it okay to consume calories? Yes, the whole goal here is to rethink the way you're looking at food, to rethink the way that you're consuming food, and to start to extend the amount of time where you are going without food or going with very minimal amount of food. Okay. So that's really the goal here.

Now, let's see. The next question is, "Can I do an extended fast while on my medications?" Okay. This is a great question. And there are certain medications that can interfere with your ability to do a long fast, like a two+ day water fast. And that would be things like diabetes medication. Steroid medications can impact it. Some heart medications.

So it's always advisable to talk with your prescribing doctor. Have a conversation with them. If you have a functional health doctor as well or a functional health practitioner, you can converse with them as well and create a team to help you. And that's always advisable. What I tell people is this. A simple fast, 12 hours between your last meal and your first meal. Really safe. Honestly, it's really safe for just about everybody. So that's a great approach.

Honestly, even my wife when she was pregnant, when she was nine months pregnant, consuming a lot of calories to restore the baby, even when we had twins, was oftentimes doing a 12-hour overnight fast because she was resting during that period of time. So you can still consume a tremendous amount of calories in the 12 hours that you do eat.

And even young children will fast for 12 hours easily because they're sleeping overnight. My kids will finish dinner at 6 p.m. And then they oftentimes won't eat breakfast until 8:30 or something like that.

And so most people can do a simple fast, 12 hours overnight, fairly easily. There are certain cases where when may not recommend it, like a severe cancer cachexia where somebody is really wasting away quickly. We might want to do a good form of liquid nutrition every hour or two to just get nutrients into their body. But again, that's a very rare exception. Obviously, newborns are going to be nursing continuously. So they wouldn't be able to do it either.

But that actually brings me to one of the other questions which is, "Can I fast if I'm nursing a child?" And that's important, too, because I find most nursing women have no problem doing a 12-hour fast as long as they

consume a lot of calories during the 12 hours that they're eating. So if they start eating at, let's say 8 a.m., finish eating by 8 p.m., they need to consume a really good amount of calories. They need to eat until they're really satiated during that period of time. That's extremely important.

But if they do that, then it's not like they need a midnight snack. Or they don't need to wake up at 5 a.m. to eat. They typically can fast overnight, that 12 hours. And that's really powerful because it allows the gut to heal. It allows the liver to go through a complete blood cleansing cycle, just takes stress off our system. So I think that that's really important.

Obviously, newborns need to be nursing every several hours. So they're not going to do it. But that's more of how nature works. That's how God designed us. So we don't concern ourselves with that.

But most nursing women can certainly do a 12-hour fast. Beyond that, it's a case-by-case basis. Now, what I tell people is this. When it comes to nursing, what I found out when we had kids is that some women are under producers. They just don't produce that much milk. It's very hard for them to produce milk. Other women produce way more milk than they need to. They need to be pumping. They're producing all this extra milk. And then other women are right in the middle.

So if you are in the middle or an under producer, then I would be careful. I would really just watch your milk supply. So if you try to do a 16 or an 18-hour fast, I would try to just watch your milk supply. If you see it diminishing, you see your milk production really dropping even though you're following all the strategies we talk about how to do a fast successfully and you're doing the 16 to 18-hour fast, then I would not do that.

You want to do whatever you can to be able to produce the breast milk you need for the short period of time, maybe up to a year or two that your child is nursing. Most women should definitely be breastfeeding for the first six months of life. And if you can do it for a year or two years, that's even better. So it's a short period of time overall. And that may not be the best time for you to do longer fasts. You can do that obviously when the kids are older.

And so if you're an overproducer, you're somebody that's producing a lot of milk, then you really shouldn't have an issue because when we're in a time of famine or the body senses we're in a time of famine like we're going periods of time without food, it's really great for reducing inflammation and all the other benefits that we talk about, stimulating genetic repair mechanisms and stem cells and helping reduce chronic disease and all these great benefits. However, it's not a really good time for reproducing and creating breast milk to feed another human being. And so the body may start to reduce breast milk production.

If you're an over producer, it's no big deal because you're already producing so much. So you should definitely be able to get the benefits of fasting and be nursing.

Again, if you're an under producer, though, because that famine stimulus may reduce your breast milk production, it's really important that you keep tabs on that. So you're just constantly checking that to make sure you're producing enough to feed your child properly.

So it's a great question. And a lot of people ask me about age restrictions as well. Can kids fast? Without a doubt, kids can do a 12-hour simple fast, overnight fast. Many kids can easily do a 14-hour and even sometimes in some cases up to a 16-hour fast. Beyond that, I'm not a big fan of fasting kids unless maybe they've got some sort of a chronic disease. In certain cases, working with a trained healthcare practitioner—I know in Europe they fast kids often. In America, it's really not accepted. I don't advocate it. But in certain cases, it can be effective. Again, this summit is not about advocating anybody to fast a child. But a simple fast, like we said, 12 hours, maybe 14 hours, maybe up to 16 hours, kids should be totally fine with that.

My kids are doing 14-hour overnight fasts. They're growing fast. They're 3-year-old twin boys. And they're doing overnight fasts without an issue. So kids can certainly do that. Again, beyond that I would be careful with fasting.

And when can somebody really start to get the benefits of fasting beyond being a child? Really that adult stage. Once you finish your growth spurt or finish growing, that's when you might consider doing more of a longer fast, beyond 16 hours. So even teenagers can really benefit from a 16-hour fast. I'm a huge fan of getting teenager doing 16-hour fasts and eating two to three really good sized meals in that 8 hour window.

So that would be really good to do that unless they have some sort of an eating disorder. Somebody who has bulimia or anorexia or something like that should definitely not be fasting. Let's just focus on healing with good, nutrient-dense foods.

However, if you don't have that and you want to do this time restricted feeding, eating within an 8-hour time range can be awesome for teenagers. It's like, "Hey, eat breakfast at 10 a.m. Eat your second meal at 1 or 2 p.m. And then eat your dinner at 5 or 6 p.m." Something along those lines. As long as you're eating well—good, high quality foods—and eating until you're full, until you're satiated, no problems at all with that.

So hopefully that helps address any sort of age restrictions. As you get older, you finish growing, you're in your 20s, you can definitely start to

extend that out. Maybe do a 24-hour fast or a 36 or a 48 or something like that, or even do a three to five-day fast if you want and get the benefits of that. But I wouldn't do those longer fasts until you're finished growing, really in your early 20s and beyond.

So next question is, "Can I exercise while fasting?" And you without a doubt can. And what I want you to understand, number one, is this. When you're doing a fasting approach—let's say you're doing a 24-hour fast, I would highly recommend making sure you're getting out and moving. So that's the first thing.

And I'm going to differentiate between moving and really high intensity exercise. So moving would be walking, just going out, doing something really light. Something that you can have a conversation and still do. So that might be walking. It might be light on the elliptical machine or on a treadmill or on a stationary bike or something along those lines. Something that you can have a conversation with I call movement. So you're moving your body. That's very anti-inflammatory and very easy for you. Everybody can do that.

Now as far as exercise, if you want to do high intensity exercise, you definitely can do this fasting. However, I would recommend getting in some level of fitness first. So I wouldn't make it your first time that you exercise at a high intensity when you're at the peak of an 18-hour fast. If you haven't exercised at all and then you haven't eaten since dinner at 6 p.m. And it's now 12 p.m. the next day or around lunch time. It's not a good idea to do your exercise for your very first time. Not a really good time.

Now, could you do it in the morning on an empty stomach? Certainly, I think you'd probably be fine as long as you're hydrated. But I wouldn't try to extend it beyond 14 to 16 hours and then do the [exercise].

Now, once you have a certain level of fitness and you've been practicing intermittent fasting for a little while, you can absolutely do this. In fact, I wouldn't even consider at this point in my life doing exercise after a meal. I want to give myself the maximal amount of time to digest food. So I don't eat anything before I exercise.

And I will often exercise on 16, 18-hour fasts. 24-hour fasts, I exercise. I even did a four-day fast. And I was actually going to do a fifth day. But on the fourth day in the afternoon, it was like my intuition was just saying, "I need to workout. I need to lift weights." My muscles were just calling to me. "I need to lift weights."

And I went and worked out. And I thought at first, "Well, I'm just going to take it really light because I haven't eaten in four days. I'm probably going to be weak. I don't want to hurt myself here." So I started going

light. And it was like I just felt this massive rush of energy and this strength. And I ended up being just as strong if not stronger than my normal workouts. Worked out at a really high intensity. And after the workout I wasn't even hungry.

But that was unique because I've developed these fasting muscles. I've been doing this for a while. It's like trying to train with an elite fitness guru. You're not going to train at that level until you've doing this for at least a good period of time. So don't expect something like that right away. But as you start to fast, doing intermittent fasting, as you train your body with high intensity exercise, you can absolutely do it. In fact, your body will crave it. You will absolutely love it. And you're going to get the best results when it comes to boosting human growth hormone and stimulating cellular autophagy and stem cells when you work out at a peak of your fast.

So let's say you finish eating lunch at 1 o'clock on Monday. And then you do a 24-hour fast where you're just drinking lots of water, maybe some coffee or herbal teas or something like that that you could do, maybe even a fat-fuel coffee where you do Bulletproof Coffee, like if you do MCT oil or something like that in the morning the next day.

But then you wait until about lunchtime the next day, 12, 1 o'clock. And then you train your body. You are going to stimulate so much growth hormone, so much autophagy. You get a huge rush of this genetic repair that takes place when you do that. It's absolutely incredible when you're able to do that and you've built up the level of stress resiliency in your body to be able to handle that.

Make sure you're well hydrated. Make sure you've got minerals if you need it. That can be helpful. Sometimes things like exogenous ketones can be really helpful and really resourceful. I actually even created a product called Keto Edge that really helps people with this that want to get these benefits and really provides electrolytes, provides exogenous ketones, different things like that that can really support your body when you try to get these benefits and train at a high level in a fasted state.

So these are all things that you can do. But the general answer is you can absolutely work out and work out at a high intensity in a fasted state. However, just like I've been saying throughout this whole summit, fasting is a muscle. It's going to be uncomfortable at first just like exercise. When you first start training, it's uncomfortable. So I would make sure you've built up a certain level of fasting muscle before you start to try to implement high intensity exercise in an extended fast or a 16+ hour fasted state. So hopefully that was helpful. Hopefully that helped explain that question for you guys.

Now, another question. How long can I fast and it still be safe? A lot of the speakers have talked about the benefits of doing four, five days fasts. We've had people talking about things like 18-day fasts and whatnot, doing water fasts for this long.

So how long can you do it and it be safe? It's really just dependent upon you. The better you've built up your fasting muscles, the better off you're going to be.

I know one of my first clients that I worked in my health clinic had severe, debilitating ulcerative colitis to where he couldn't work. He couldn't go to school. He literally would have blood and mucus and puss coming out every time he went to the bathroom which was typically 15 times a day. Just really couldn't function. And I got him fasting. And really, he and I just talked about it. We talked about this idea. And he started fasting. And after the first day, he said it was the best he had felt in over a decade, over 10 years. And then he just continued the fast.

And at this time, I didn't understand. How long can somebody fast? He just kept going. I said, "Well, maybe try a three-day. Maybe try a five-day." And he kept going.

And he was like, "I just feel so good. I'm afraid to eat. I don't even want to eat. I just feel so good. It's the best I've felt in a long time."

And he kept on going. And whenever I'd see him, he looked better and better and better. Around, I would say, day 12 or so, I definitely started seeing pretty significant weight loss. But he felt so good. And his energy was better that he wanted to continue to go. And so he just kept on going. He ended up breaking it on day 40. So he actually did a 40-day water fast.

And he's pretty tall. He's 6 feet tall. He had actually dropped from about 130 pounds, which he was already very, very thin because of the ulcerative colitis. He actually went, and he dropped down. I think he was like—I don't know—112 pounds or something like that. He was extremely thin. Skin and bones. Parents were worried about him. But he had felt so good.

When he started eating again and he started training his body and then doing this sort of training with doing high intensity strength training in a fully fasted state, within six months he got to 175 pounds of muscle. 6 feet, 175 pounds. He looked ripped. He looked amazing. So it was really profound the changes and transformation that he saw. And these are the kind of results that you can see when you do this properly.

However, how long can you do an extended fast? Do it until your intuition tells you you need to stop. That's what I tell people. So you

might have a goal of doing a seven-day water fast. But if you're feeling really bad, you're feeling really awful on day five, you've tried all the mitigating strategies that I've given you and that the other presenters have given you, you're still feeling really bad, then break your fast. It's not a bad thing. You're going to get a lot of benefits from doing these fasts.

And ultimately, fasting is a lifestyle. So it's not like, "We're only going to do one fast. That's it. Then we're going to go back to eating three, four, five, six meals a day." It's not the case. We're building a lifestyle around this. So if you don't hit your goal on one fast, it is okay. It's not the end of the world. Break your fast when you're ready to break it.

So again, it's always good, especially if you're going to do a very long extended fast, to work with a doctor, especially if you've got a chronic disease or if you're on medications. I would highly recommend working with your doctor on that. It's always good advice there.

Let's see. "Will I lose a lot of muscle on a fast?" That's a really good question. I have always had this concern. Would I lose muscle on a fast? To me, the worst thing in the world to my physical body is losing muscle. I hate that. I'm already very thin. I was told I was skinny my whole life. I work out intensely. I've worked out really hard to earn the muscle mass that I have. Why would I want to just lose it by fasting? Some of you guys out there listening really can relate with that idea.

Here's the good thing. The hormonal response when we are fasting, we're going to stimulate human growth hormone. Human growth hormone tells the body, "Preserve lean body tissue. Preserve muscle mass." It tells the body to do that.

Now, there's also something called cellular autophagy where the body starts to break down some of these older, decaying cells and breaking down older, decaying mitochondria. After a period of time, you are going to start to lose muscle. On an intermittent fast, you're really not going to lose muscle. So if you're fasting 16, 18, 20 hours, you're not going to lose muscle during that period of time as long as you're eating until you're satiated when you do eat.

So you fast when you're fasting. You eat and you eat really well when you are eating in your building window, whatever time that is. If it's an eight-hour eating window, if it's one meal a day, you eat and you eat really well until you're really satiated.

You want to be full at the end of that meal. That doesn't mean you want to be full to the point where you have massive acid reflux, you feel nauseous, you feel bloated. It doesn't mean you want to go beyond that point. But you want to feel really full. You want to feel really satiated.

You want to feel well resourced. That's very important. As long as you're doing that and you're training your body—you're not changing your training habits—you're not going to lose muscle mass. So you don't need to worry about that.

Now, if you're doing an extended fast beyond two days, now you can definitely lose some muscle mass. However, the muscle mass that you do lose is actually the poor quality muscle. Your body is actually very intelligent. There's incredible intelligence within us. The innate intelligence tells us, "Preserve the best possible muscle tissue."

But we've got all this muscle tissue that's been damaged by stress throughout the course of our lives. The tendons are damaged. There's genetic damage to some of these muscle cells. There's mitochondria damage. Those are the cells the body is going to break down. So it's going to break down the muscle mass you really don't want.

It's like if you're trying to do renovations on a home, the area of the home that you really like you're not going to do the renovations on. You're going to do the renovations on the area of the home that's of poor quality or that you want to change and adapt. And that's really the same thing that the body is going to do. It's going to do renovations on muscle tissue that's of poorer quality. It's going to make it better. It's going to make it serve you at a higher level, be stronger, more resilient to stress. And that's what you want.

So if you do lose muscle mass doing an extended fast, you will actually gain new, stronger muscle cells. And then once you get back into eating and eating well as well as training your body, you're going to regain that muscle mass. And you're going to regain it in a much superior form than what you lost. So hopefully that really helps those of you guys out there who had that concern.

"What if I feel a strong sense of hunger when I fast?" You know what? If you feel that, that's normal. That's totally normal. I feel it too sometimes when I'm fasting. And what happens is when our stomach gets empty we secrete this hormone called ghrelin. And ghrelin tells us, "I'm hungry." It starts to make the stomach growl. Ghrelin like growl. Stomach starts to growl. You start to get hungry.

Now, ghrelin is also stimulated based on a conditioned response. So if we're used to eating lunch at 12 o'clock and it's 12 o'clock, we should be secreting some ghrelin to tell us, "Hey, it's time to eat. I'm hungry." This is normal.

We call it a hunger wave. It's just a wave. You've got to ride it out. So how do you ride it out? What's a good strategy? Drink 8 to 16 ounces of water. That will naturally stretch and expand the stomach which will

slow down the ghrelin. You won't feel as hungry. So if you do that, you'll feel a lot better. And you should feel good that way.

Now, what you'll notice is if you're living a fasting lifestyle there are going to be times where you're going to feel hungry, and you need to eat. And that's okay, too. You can certainly eat as well. How do you differentiate between, hey, just a hunger wave and like, "Hey, do I really, really need to eat?" Just trust your intuition.

That's what I tell people. Just trust your intuition. I say, "Hey, start by drinking 8 to 16+ ounces of water." Drink the water. Wait about 10 minutes. If you're still feeling really, really hungry, not an emotional desire to eat but like, "Hey, I am so hungry I really need to eat," then eat something. Again, not the end of the world.

As you start to stretch your fasting muscle and you train it, you'll get better and better. Fasting will be just something that comes that much more naturally to you. We're looking at the long picture, the lifestyle approach to this. You want this to be a lifestyle, not just, "Hey, I'm going to try it for a very short period of time in my life. And that's it." You want to create a lifestyle around it. And so if you're really hungry, then break your fast and eat. That's what I tell people.

But remember that there are hunger waves. And you can suppress those hunger waves by drinking water, by being busy. A lot of times people are busy during their hunger waves. You're working on projects or whatever it is. You're traveling.

Right now, I usually eat lunch. And this is right around the time. I'm doing this video when I normally eat. Even when I do 24-hour fasts, which I do two to three times a week, I'm going lunch to lunch on those fasts. So right now, as I'm talking, I'm actually suppressing a hunger wave because I'm doing this video. If I was just sitting around, I'd be like, "It'd be really nice to eat lunch right now." I would have a hunger wave. But because I'm doing this video, it's got me busy. I obviously can't eat. I'm talking right here to you guys. So because of that, it's suppressing it.

And then what'll happen is because I suppress the hunger wave during the period of time when I normally would eat, after that's done I lose that strong hunger wave. Now, would I still have an emotional, little, "Hey, yeah, I might want to eat"? Yeah, but it's not a really strong hunger wave. So sometimes just being busy during your hunger wave is really helpful. A lot of people find that that helps support their body.

Now, if you feel really tired, some people have this other response where they just feel really, really tired at times when they're fasting. And if that's you, rest. That's why I say, "Hey, if you're doing fasting and you're just getting going, it's a really good idea—don't schedule yourself so

stressful.”

You know yourself. For some of you guys, you actually need a busy day in order to suppress the hunger waves. For others of you, all that business and stress will actually just overwhelm you. You'll feel really exhausted. You'll feel dizzy. You'll have headaches. You'll have problems.

For those of you on this end of the spectrum that experience that, don't schedule a stressful day. Instead, schedule relaxation. Maybe go to the spa. I tell people, “Hey, if you're going to do an extended fast, let's say it costs you—I don't know—\$30 a day of eating. So you would normally spend \$30 a day. And over the course of five days you're trying to do a five day fast. It's \$150 [for five days]. Obviously, you're not eating. So now you've got \$150. With that \$150 you could take that and go get one or two massages or whatever the massages cost. Go to the spa on one of those days. You've got that extra money. Go reinvest it into yourself.” That's relaxation, reduces stress on your body.

And schedule that spa treatment right at a time when you would normally really eat a meal. So oftentimes like day one or day two is actually one of the best times to schedule that spa treatment because that's going to help you move through those hunger waves. By the time you get to day four, it's like your hunger cravings have been so suppressed that you really don't notice it. It's actually much easier to go to a fifth day by the time you get to day four. Those first three days can be the toughest.

If you're fat adapted or keto adapted before you get started with a fast, then it's easier. Usually by day three, you're feeling really good. For me, day two is the hardest. Day two is the hardest. Day two is when I schedule the spa treatment, maybe two of them, to really help me out. So that can be really, really helpful, just scheduling something during those periods of time.

So if you're somebody that does well when you're busy and that can help you suppress the hunger waves, then get yourself busy. That usually works well for me. If you're somebody who gets really tired when you're fasting, then schedule a nap. Schedule relaxation. Schedule meditation. Schedule a spa treatment. Schedule something like that that's just really, really just light and easy on you. And that will help you be able to go through the fast successfully.

“When do I know it is time to break a fast?” You know it's time to break a fast if you're feeling really, really awful. You've done all the mitigating strategies, drank the water. You tried the spa treatment. You tried taking a nap. You did the salts. You did these types of things we talked about. You're just not feeling good. You're feeling run down. Break the fast!

Again, I've been saying this throughout this whole talk. It's a lifestyle approach. You don't necessarily always have to muscle yourself through it. Sometimes it's about finesse and getting a little bit better each and every day. Get a little bit better. So this month, I'm a little bit better at fasting than I was last month. You're developing that fasting muscle because you're in it for the long game. This is a lifestyle. This is something you're going to be practicing and applying whether it's an intermittent fast or occasional, extended fasts. You're going to be doing this on a regular basis.

"How often can you do extended fasts?" It really depends. For people with chronic disease, I try to have them do a three to five, sometimes a seven-day fast every four to six weeks. They've got a chronic disease. And they're highly motivated. I might try to do that.

For somebody else, like somebody lean like me, I might do one or two a year. I don't need to do as much. I'm lean. I've done this a lot. I'm practicing intermittent fasting on a regular basis. I don't need to do as much. And so I actually listen to my intuition.

If I'm feeling like I'm getting a fever or flu or a sinus infection, that's how I started my last fast. I just felt really awful. Actually, I had a stomach flu. And I was throwing up. And I couldn't keep anything down. And so it was like, "Okay. Well, I'm fasting until I feel better." And by the time I felt better it was day three. I felt better. I'm like, "I'm just going to keep this thing going because I want to make sure I don't get sick again." And I ended up on day four, like I was saying, feeling so good I needed to go lift weights.

So for the first two days were actually a dry fast where I couldn't even get water down. Dry fasting has a lot of great health benefits as well. I don't advocate it unless you're working with a health practitioner. Dry fast means you're not drinking water. No water. No food. So I don't advocate that unless you're working with a trained healthcare practitioner. It's more dangerous. But it can have tremendous health benefits that you can actually stimulate three times the amount of autophagy.

Basically, if you do a day of dry fasting, you stimulate three times the amount of autophagy that you would with a day of water fasting because your body is breaking down the cells to get water. It needs water. So it's pulling water out of the cells. So you're getting more autophagy, more cell cleansing.

But again, it can be dangerous. So I don't recommend that unless you're working with a practitioner who knows how to coach you through it. So be sure of that.

But I do it based on intuition. So just is my body saying, “You know what? I think now is a good time. Right now is a good time to do this”? So what I tell people is, hey, intermittent fasting. Pick your intermittent fasting strategies. And we give you a lot of information in the summit and in the Quickstart Guide. Pick your strategy that you like. Practice that on a daily basis. And then you may try your hand at an extended fast maybe once every three months, maybe once every six months, maybe once every year.

If you’re trying to lose a lot of weight, you might want to do it a little bit more often. If you’re not trying to lose weight like me, you’re really lean, then do it less often. And you’re going to get great benefits from that.

And then the last question. “Is fasting harder the older you get?” My answer to that is yes and no. Yes, because there are more metabolic damage. The more metabolically damaged somebody is, the harder it’s going to be to fast right off the bat. It’s like exercise again. The more metabolically damaged you are, the more painful and uncomfortable exercising, like going out and doing a sprint, might be or trying to lift weights. It’s going to be more uncomfortable. It’s the same thing with somebody who’s older. They’re more metabolically damaged.

But that’s okay because, just like exercise, over time—start small—you build up those fasting muscles. You get stronger. You get more resilient. Before long, it becomes a lot easier. And I typically will tell people. If you want to make you’re extended fast as comfortable as possible—so you’re like, “You know what? I have a goal this year.” We’re doing this summit in January. “I have a goal this year. I want to do a five-day water fast this year.”

There are two ways you could do it. You could start tomorrow with a five-day water fast. And that would be like saying, “Hey, I really want to run a 10K this year. I want to run a 10K.” And you go out tomorrow. And you run a 10K. It’s going to suck. If you’ve never fasted before, you never trained before, it’s not going to feel great. You’re going to feel really uncomfortable. It could be really painful.

If you want to make it more comfortable, do a gradual approach. Train your body. And you can say, “You know what? I want to have trained my body so I’m ready to do that five-day fast in, let’s say, six months, nine months.” And you just start by doing intermittent fasting. And you get to the point where you can do a weekly 24-hour fast no problem. And maybe a weekly 36-hour fast where you eat dinner on Saturday. You don’t eat until, let’s say, breakfast on Monday, the following day. You’re like, “Hey, that wasn’t that hard. I can do that.”

By the time you get to that point, your body is ready. You’ve built up the fasting muscles to be able to now do a longer fast. It’s not going to be

as uncomfortable and as painful. So now you can do it. Now you can schedule it out, prepare your body appropriately. And go ahead and do it. So that's pretty much how you want to do it.

Between three to five days fasts, I typically I am recommending at least four weeks so you can regain your system, regain your calories, especially if you're underweight. If you're overweight, probably not as important. There are a lot of people whom I've worked with who will eat on the weekends and do a five-day fast Monday through Friday. And they lose a lot of weight quickly. They feel really, really good. And they just keep themselves really busy Monday through Friday. On the weekends, they enjoy great foods, obviously highly nutrient dense foods. And they hit their health goals. And they get amazing response. They get an amazing health transformation that way.

So there are a lot of different ways that you could do it. If you're underweight, certainly you don't want to do too many extended fasts too quickly. You'll lose weight. You won't be able to rebuild that really good muscle that we talked about. So you've got to pace it for yourself. Typically, four to six weeks at least between an extended, more than two-day fast is a good approach to take. And you may just do one a year, one every six months, or something like that. So you'll find a good strategy that works for you.

And trust the innate intelligence within you. Trust your intuition. And I'm a Christian. So I would say to trust the leading of the Holy Spirit. And I just feel like sometimes the Holy Spirit tells me, "Hey, now is a time to fast." And then I'm going to fast. And so that's what you want to do. And that's really the best advice to get started and get going.

Hopefully, you guys are really enjoying the summit and that this Q&A helped clear a lot of this stuff up for you.

Remember. The goal is to just get started. Start with the simple fast. The simple fast, 12 hours between your last meal and your first meal. If you've never fasted before, that's where to start. If you're already doing that, maybe bump it up to the 14 hours between your last meal and your first meal. That's like going out and taking a walk around your block. Not extremely stressful, but it gets your body moving, gets you moving in the right direction. And that might be just enough for you right now.

And then as you get stronger, you're going to be able to handle a little bit more. Now instead of just walking around your block, you're doing little intervals where you do a little 10-second jog or something along those lines. And that's like pushing it up to that 16-hour fast. And then you'll see. You'll see the strategy that's going to work best for you.

Oh, one final question. A lot of people ask me, “Is fasting bad for women?” And we address that in the summit. Several great interviews on that—Marcelle Pick, Dr. Michelle Sands, Dr. Naomi Whittel. A lot of great speakers talk about that. So be sure to check out those interviews. Women can absolutely fast.

Many women right around their menstrual cycle find that they’re more hungry and have more cravings. And I say, “Hey, trust your intuition.” You might fast outside that part of your cycle. So you may notice different changes as you’re going through your menstrual cycle. Totally fine. So just listen to your body.

And that’s really ultimately what all of this is about, developing a level of kinesthetic intelligence, a mastery of our own bodies and the messages our body gives us. And I think fasting helps clue us into that better than anything else. It really helps us clue into the messages our bodies are giving us. Are they real? Do we really need to address it or not? And you’ll find over time that the more that you do this, the better kinesthetic intelligence and bodily intuition you experience.

And so hopefully you guys got a lot out of this. Hey, if you are, definitely consider owning the entire Fasting Transformation Summit for yourself. I would love that if you own this and shared it with your friends and your family. That would be an amazing gift back to me and my team for producing this content, almost like how you would tip your waiter at a restaurant. That would be such a blessing. And I’d love to hear your feedback on this interview and if this really helped you guys out.

So be blessed, everybody. And I’ll see you soon.

Shifting Your Mindset and Cellular Health with Fasting

Guest: Robert Scott Bell, D.A.

Dr. Jockers: Well, welcome to the Fasting Transformation Summit where we're uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. We're talking about fasting. I'm your host Dr. David Jockers and I'm excited about the interview you, guys, are about to listen to. This is with Robert Scott Bell of *The Robert Scott Bell Show*. He's a good friend of mine.

And I brought him on because he really understands the philosophy behind the holistic, vitalistic model of healthcare and really how the body works as a holistic whole. And so I brought him on to talk about that and talk about the right mindset when it comes to fasting. We talk a lot about the body's vital force, this incredible force within us. It's like say I died right here, I'd weigh exactly the same. But what would be difference between me when I was alive and right after I passed? It's this vital force that animates all the cells of our body.

Well, Robert Scott Bell really goes into that in detail in this interview and talks about how fasting helps optimize this life force, helps our body to heal and regenerate itself. And so I know you, guys, are going to get so much out of this interview. If you have comments and questions, leave them in the box below. And I'd love to hear your feedback on this interview. So stay tuned and I know you'll enjoy it.

Okay, so Robert Scott Bell from *The Robert Scott Bell Show*, I'm really excited to have you on. And go ahead and share with our viewers really your background and how you got in to natural health and healing.

Robert: Well, Dr. David Jockers, the journey from modern medicine, and medically grown, or Standard American Diet, and the pharmaceutical family, really you eventually reach, as many people have, a point or a realization that the medicines that are the mainstay, in the West, are not the answer to the vast majority of the problems, in fact, they may be the contributors to the problems.

And so growing up in a medical family, I didn't know this. Going back into my history, looking back from the point where I woke up about 19 years of age, and looked back at what had been done to me, I recognized, at that point, that I needed a change. And the change had to come from somewhere other than medicine.

And that's why I prayed on it because I knew it was going to have to come from God. And I had to be awake, aware, and open enough to receive the messages that were going to be delivered to me. So it's very important to reach deep into the heart of source and ask for help when the human experts clearly did not know what to do for me, and my ailments, and the illnesses that I suffered with the first 19 years, another few more years before I figured it out, though.

Dr. Jockers: Mmm hmm, yeah, absolutely. And so when we look at our society, we're really an overfed, undernourished society. And most people, when we think about it, it's like so we've got this overfed, undernourished society, and really a big part of that is that people just don't really understand how to take care of their bodies. And I know you've got this great statement that says, "The power to heal is from within." And so can you elaborate on that?

Robert: Well, much of my young life growing up in a medical family, these ailments that I suffered from, whether they be gastrointestinal, musculoskeletal inflammatory conditions, chronic infections from acute infections, ear, nose, throat, sinus, intestinal, all of that, they were all met with getting medicines. And the expert said, "You know, we're not sure why this is happening, but there take this."

And so you felt, and as I did, very disempowered, very victimized by it. So I felt like I didn't have any power in the situation. It was like I could pray, which I believe in, but I really wanted to have a little bit more participation in it, as opposed to feeling like a victim in this context. But nothing that the doctors did required my participation just, "Take this. Here's a prescription. Take it," or your parents would take you to a doctor. And that's what would happen.

So it wasn't a happy place for me to be. I didn't feel good about my future. Seeing that I had uncles, and aunts, and grandparents die of cancer and treatment of cancer, I realized that this was not going to be a long path for me because I was ill at a younger age than they ever were.

So in answer to prayers, years later of course, was the realization that the birthright we have was in healing and in accessing all the information, which was long lost seemingly and is now coming back, but the recognition that the power to heal was mine and it was a gift from a place far higher than any medical school or medical doctor that it went right to the heart of God. And I had to recognize and embrace that. Of course, it took me out of the victim mentality that I wasn't just unlucky, or I had the victim of bad genes, or anything like that, that I had actively co-created my condition.

Now, my parents may have been ignorant, too, of this, because we were a medical culture and medical family. But it was a recognition that I was not a victim, in fact that I actively, even unconsciously participated in whatever state of lack of health called disease I had or if I was going to come out of it that I had to actively participate. But the power was always mine, I just had to reclaim it.

Dr. Jockers: That's right, absolutely. And so most people in society are really walking around with this learned helplessness that, in a sense, that really ultimately, they don't really have much control over their health. And ultimately, we know that ancient healers had more of a vitalistic health approach that was very vitalistic and holistic as opposed to, in our society, the allopathic professionalism, more mechanistic and reductionistic. And can you go through those terms and elaborate on the differences there?

Robert: Well, growing up in a medical family and, as well as a medical culture, I learned of molecular reductionism. I didn't have those terms at the time. It's just what we learned that everything could be adjusted by a molecule manipulation. So if I had an infection, they gave me a chemotherapeutic drug called an antibiotic. Never asked a question as to what went wrong, other than to say, "We can blame a germ that we think you had."

If I had an inflammation disease or an ailment, which I did, skeletal inflammation, then it was a deficiency of more chemicals, synthetic as they were, like non-steroidal or steroidal anti-inflammatory drug molecules. And so it reduced the body to just tweaking chemistry. Not from the standpoint of how our chemistry operates long before there was modern medicine, that is we got our food as medicine, medicine as food. And they were just whole food and everything that was in it that basically created a healthy body if you didn't have it, maybe not. So I was exposed to that growing up.

And then, it wasn't until I was 24 years of age that I even heard the word homeopathy, which ironically comes out of Germany where there is a lot of molecular reductionist thinking. But doctor Samuel Hahnemann, brilliant doctor, physician, he found that the medicine in his day was just

as likely to kill you as it was to help you, he thought, "I can't do that to my patients."

This was the wake-up call I had when I was learning/teaching or learning to become a doctor, that at a certain point I realized that if I was to become a doctor like the medical doctors that took care of me, I couldn't live with myself. That was not what I wanted to be. I wanted to be a healer.

So I had to learn about this other realm. I had to become open to it because it's counterintuitive. When we talk about molecules, I was going in the other direction in terms of energy. And we bring up the term vital force and homeopathy. And there's concept of vitalistic perspectives on health and healing that we have spirit, holy spirit, divine spirit that imbues us with life. And the vitalist will look to that and say, "How do we free that energy that is yours by virtue of your birthright, right, and the fact that you're alive? How do we free up, well, remove the blockages? How do we allow that flow to happen? Where does that originate?"

And that's not a molecular reductionist viewpoint now. Now, you're looking at life as a fluent, energetic, a living system. And it's so much more comprehensive than this molecule and that molecule. And this is not to negate the reality that we break complex substances from food down in a base-level molecule, but even that is not far enough because ultimately the molecules have to be released in energetic forms for utilization fully. So it's a complexed combination of the two. But without the vital force, life doesn't exist, you can throw all the molecules you want at it.

And utilizing food as our medicine or the removal of food as our medicine is a fascinating concept to be utilized appropriately to free that vital force up that had been gummed up, blocked up because of, maybe there were molecules in the way, but it blocked the vital flow.

Dr. Jockers: Yeah, that's so good. And how about holism? Let's go into that a little bit of detail and how that works with vitalism.

Robert: Well, holism, I look at things holistically. What does that mean? If we spell it whole, we think of the whole. Even though it's spelled hole, well, you think, "Well, there's a hole there. What do we got to fill it with, right?"

Dr. Jockers: Yep.

Robert: But holism and holistic, the concepts mean that everything is connected to everything. It's more than the hip bone is connected to the thigh bone, right. It's about every aspect of life connected to every aspect of life. And again, the vital force, the Holy Spirit connects us all.

If we use contemporary movie examples, we talk about *The Force*. And people get that from a science fiction or a fantasy kind of concept.

But it really is a very real aspect of if you impact one part of the body, you necessarily impact another. And if you see a symptom in one part of the body, it doesn't mean that that specific area of the body is in any way, shape or form, diseased, it's communicating to us. So we have to go very deep and broad to see where can we track back these original or find these original starting points, the origin points.

So we see in allopathic medicine a disintegration of the body. You break it into little parts. And you can go to one doctor and another, and they all have their specialty, and they never see the whole forest through the trees, and will look at your toe, your heart, your skeleton, and all of that disconnect means we can control or manipulate you or you can be controlled or manipulated because one doctor says it's this, the other doctor says it's that. And you're left in a state of confusion and you're more victimized than when you began.

Dr. Jockers: Yeah, absolutely. And so in our society of this fear of things like fasting, we've got commercials on TV left and right telling us about breakfast cereals. They're marketing them a lot to, obviously, to children, "You can't miss your snacks." Obviously, the food industry, in general, when it comes to snacks is a multi-multi-billion-dollar industry. And so how is that impacted just the average individual's perspective of fasting and meal timing?

Robert: We were totally marketed. Now, when I grew up, it was the Standard American Diet. And it was considered four food groups. And I joke about it being pizza, hotdogs, Coca-Cola, and potato chips. And what was that? It's what we were marketed. And the moms out there were in a new arena in the 20th Century where they can just go to the grocery store. Everything was miraculously there, it was wrapped in cellophane or something. And it was convenient. It was easy.

And people didn't have the long view then and understand that the quality would suffer, all the things that make food, food, would be removed. And that would be problematic, but again, for marketing purposes we were sold that, "Wow! fast food, easy food, it's always available." And because the food was altered, particularly refined, processed, we lost the mineral content primarily from those foods. And that caused a deficiency syndrome to materialize, if you will. And at that point, we became more hungry than ever. We had more food than ever or we perceived that we did, that we couldn't go an hour without eating.

And this is my story, as well. You can diagnose hypoglycemia. For instance, you go an hour after a meal, whether it's even a fruit juice or something, and suddenly you're crashing. And well, what do you do?

Why did it happen? So fasting would be totally against what you would think would be good for you at that point because, "I'm so hungry, I'm going to die!"

And so that was my experience. And I thought, at a certain point we were taught, in fact, even in holistically-inclined circles, they were saying, "Yeah, eat a lot of small meals throughout the day, a little bit here, a little bit there." It made sense because it fit where people were. They couldn't last long. And so I'd be dying if I didn't get something in me in an hour or two after a meal.

So one fed into the other, interesting to say it in that language. But we were marketed in this idea: fast food, cheap food, easy food, food unfortunately devoid of the vitamins, minerals, and trace minerals necessary for us to sustain when we eat inability to go for hours if not days without having to eat like some of our ancestors. They were hunter gatherers. They didn't always have the drive-thru. It wasn't there. It was like you scored a big meal, "It's got to last you, right?"

But how did that happen? Of course, it was riddled with all of the minerals necessary for all of the functions of the body—the metabolic aspects from the smallest, minutest cell to the complexities of whole organs and systems working together. So we were sold this by marketing. And then, the marketing fed into the desire. And it fed into ultimately the need. It became a need artificially. And so we were stuck.

Dr. Jockers: Yeah, absolutely. And food obviously has addictive properties. It boosts up dopamine in our hypothalamus, which makes us feel good. It's a great thing. But when we're constantly going to that, we're constantly stimulating that pathway. And what are some of the problems with just eating and snacking throughout the day? We could talk about like insulin. That would be a really good one to talk about here.

Robert: Sure.

Dr. Jockers: Yep.

Robert: Well, when we fell into this pattern of frequent eating of food that was devoid of the essential minerals that we needed—again our bodies got into a pattern—and we had to feed the pattern. Now, we're also utilizing a system called the digestive system. When you put it in your mouth, hopefully you chew it up, you bring it down, you're activating a system that's different from movement.

So we now have to look at how energy works in the body. And so a lot of our energy would be robbed constantly because all of the things we need to stay vital and healthy includes movement, muscular movement,

things like that. Now that energy is constantly redirected towards the digestive system, which is an energy-intensive system to break down the things for the energy where we need or to store it for later use.

So it would rob our ability to do things when we needed to do them. Let's say when you needed to be in a fight or flight mode, you didn't have the energy to do it because you're always in that mode, in a sense. Your body was having to work to break down constantly all of this and finding little or nothing of true benefit in terms of that long-term sustenance. So we got stuck in the pattern of energy drain, energy drain.

We're supposed to be bringing energy in and it's only draining us ultimately. It makes no sense, but you're feeding yourself. How do you constantly need this energy? If cars did that, we'd like send them back to wherever they were made. You got to do better than this. So it's an interesting concept how one thing fed into the next, at this point.

And so when we have all of that energy being utilized for one thing, it's not able to be used for other things. And then, the defensive posture is well, because it wasn't just devoid of vitamins, minerals, and trace minerals in the processing era of the 20th Century into the 21st, it's also adding synthetic compounds that never before were in the food supply, ever in the history of man, in our recorded history. And so now we are having to defend against, trying to find the good stuff, but defend against the things that don't belong there, that takes energy, as well.

So your cells that would normally be an engagement in receptive mode are now going, "Whoa! We got to receive this, but wait, we can't receive that, that'll devastate us." And, of course, it depletes the energy over time. You're still eating. You're still accessing what you call food. And over time, you're depleting your life force, your vital force.

And we can talk in terms of the toxins, and the inflammation that results, and eventually cancer manifests, which is energetic. And it also can be explained in a molecular way, too. And all of this comes together and we begin saying, "My, gosh, we've done it to ourselves. This was not the way we were genetically meant to be, right?"

Dr. Jockers: Yeah, absolutely.

Robert: We're all trying to rewrite the blueprint. And it's not working.

Dr. Jockers: Yeah, absolutely. So obviously, we end up...And really, also, and this big thing I teach, it's like gosh, if we're eating meals and we're constantly eating, just like you shouldn't swim, right, they would say wait 45 minutes after you eat before you swim, but if we're constantly on the go, like we've got fast foods, we're eating, and we're moving, and doing things quickly, that's antagonistic, right, something's going to suffer.

And obviously our digestive processes are going to suffer, therefore, we're going to have undigestive food particles, more inflammation in the gut, leaky gut. So I'd like you to touch on that and then also touch on when we're eating solid foods, things with protein, carbohydrates, we're going to get this insulin spike and touch on how insulin will then cause inflammation and cell reproduction, which can lead to, obviously cancer and things like that.

Robert: Sure, of course. So when we are tracked and seemingly trapped in this pattern of always eating, but always moving, because I juxtaposed the two, right. Suddenly, you're doing both all of the time that's the concept of fast food. Who has time to sit down and enjoy a meal and really allow it to do what it's designed to do while you're given the other aspects of energy utilization or rest? We've removed ourselves so far from that. We've created an artificial reality.

And some of the greatest things we do is screw up royalty to learn the best stuff. And I had to do that with my own body. So the accomplishment, I talk about a litmus. How do you know when you've accomplished it? Well, when you can wake up and not eat until dinner and you were never even bothered by that, you forgot. You were good. And then you, again, if you want a litmus test because, as I said before, I couldn't go an hour or two or three at the most, "You know, I have to snack some more." So you can weigh those out.

Now, if you bring certain foods in your body, particularly those that are devoid of the minerals—and a lot of things that are refined carbohydrates—you're going to trigger, by necessity, a response for your body. Your body has to now take those refined sugars. Normally, it would break it down from whole foods. And there would be an ease with which there would be a transition time. But now you've got this massive influx, an extraordinary quantity of something like simple sugars.

Now, our bodies are designed ultimately to deliver sugars to the cells or even relinquish them from cells that have stored them, but not in this way. This was not normal. You even hunted for an animal, you were not going to ever get a sugar rush no matter what part of that animal you ate. So we've taken these refinements and made them staple. And they become very dangerous.

So the response to the body, of course, is to pump out more insulin in response to the sugar, which we know insulin can be a very pro-inflammatory component. It can impact on cell division or reproduction. And that's why it can be linked to cancer later, especially if you have these deficiencies, but there's another aspect of the food that's devoid of minerals.

In the plant kingdom, we can say, we can get sugars plants, certainly.

Sugar cane is a great example. It is very rich in sugars. But guess what God put in sugar cane? Loads of minerals and particularly the mineral known as chromium, about the highest concentration of any food in the world. So you begin to say, "Was there a plan here, right?" And if you don't have that coming in, you don't have a way to process, right.

Interesting story about insulin, the concept of insulin resistance, I understand why they describe it as that because it seems to be the cells are resistant to it. I've seen it to be really, well an apparent deficiency. I'm being subtle and light about it. But an apparent deficiency of minerals particularly the chromium because without the GTF chromium molecules, you can't offload what the insulin is carrying with sugar. It's like the trucks are the insulin. You get it to the loading dock and there's no chromium, you can't offload it. And then it looks like there's resistance.

So I'm not saying it's inaccurate to describe it, but it takes the mineral concept out of the equation, which is why we need nutrient-dense foods. Why we need to look to the purpose for those minerals and how, of course, they've been profitable for industries that are not interested in investing in our health, but our disease.

So then they sell us insulin, right, or they sell us diabetes drugs, right, never discussing. I have yet to meet which gastroenterologist specializing in diabetes even brings this up, even though it's in the peer-reviewed literature. So we can counteract the inflammation associated with excess pumping of insulin because we're going to be efficient, we're going to use the Kung-Fu of our system when the minerals are present.

That's the difference maker, right, again, refined foods, poison. Even if they're not containing a lot of nasty toxins, ultimately it can poison our body because other systems have to overreact or overact to compensate. And that can only go for so long until you utilize your stores of minerals, whatever you had in the body that was being depleted. This is where we see, for women, who are pregnant and they get into diagnoses like gestational diabetes, they disavow the reality that that developing baby needs a lot of those minerals that hopefully that mom had prepared for, right. That's what we call prenatal nutrition, right or preparing even to become pregnant. But the minerals, if they're not there or coming in, they will be stolen.

I say that because the life of the baby is very important and taken from mom. Mom donates them gladly. She doesn't know. And when it takes that chromium, which is really a key mineral for protection of chromosomal integrity, too, interesting, you want to protect from birth defects, that's one of the key minerals.

Now, you have the woman unable to deal with the sugars appropriately.

And they end up with that gestational diabetes diagnosis because the baby has to be protected, right. And that's overlooked again. Once again, here what do we do at that point? So these are the stories or the medical realities that even though they're in the peer-reviewed literature, very few doctors have looked in to, to apply in their own practices.

Dr. Jockers: Yeah, absolutely. And contrast that with ancient cultures, and ancient healers, and the way that they looked at food, and also vitalism in the body's innate ability to heal, and just using food as medicine, and also the ability to take food away, right, and allow that to be a stimulus for the body's innate healing ability.

Robert: Yeah, I learned a lot about fasting, the fasting issue, from my mentor in homeopathy, he talked about it. And we would deal with, for instance, the hypoglycemia with homeopathic remedies like lycopodium and iris. And we can see a modulation or reduction of intensity of symptoms, yet, there were still mineral deficiencies that had to be addressed simultaneously to that in order to get them where they needed to go or even get me where I needed to go, ultimately.

But we looked at the animal kingdom, and they are way smarter than men and women with high-level, what I call, degrees. They're figuring out a way to heal in the wild with no doctors. And very often, they will fast. They will shut down the system that requires energy to process. And they'll start dealing with what's in the body. And at that point, it converts that energy or allows that energy to be freed up to direct whatever else it needs to go.

And in many cases, it's a promotion of detoxification that occurs, right, accumulated waste or environmental toxins that have just gotten stuck because the body has never gotten an opportunity to focus there. It's always having to protect, defend against what's being brought in because we didn't know. And so the fasting concept takes that out of the occasion and allows that innate intelligence chiropractors talk about or the vital force homeopaths talk about to begin to operate without obstacle or reduce the obstacle because it knows what to do. It's our own mental constructs or lack thereof that get in the way.

And so at that point, the energy is shifting, again a vitalistic approach. And it says, "You know what? You know what to do. You're smarter than me." And, of course, we've got issues like the gut microbiome that even take it and makes us more humble, right. We think we're so great and like our gut, we depend on microbes, bugs, right. And so you get humble in a hurry at that point and say, "You know what? Creation, it's majestic. And I want to learn from it, you know."

And so we begin to get out of the way and allow that subconscious or unconscious aspect that you don't have to say, "Well, I got to think about this. I've got to make sure it works right." No, get out of the way, allow it

to work. And that fasting suddenly gets the mind out of the way, gets the things that we've corrupted out of the way, and allows for that vital force to take its proper role and start flowing like it wasn't before.

Dr. Jockers: Yep, absolutely. And every stage—and I don't know if you knew this—but every stage Socrates, Aristotle, Isocrates, of course, Jesus. Many of the people of the bible talked about fasting. Plato even says he fasted for mental and physical efficiency. And so a lot of these sages are talking about fasting to improve performance and, of course, also to get healing breakthroughs, spiritual breakthroughs. Can you touch on that?

Robert: Yeah. Clarity, in terms of the fasting, as well as the clarity that comes from fasting is fasting because if you need to be really clear, we talked about cleansing the body, right, or removing obstacles. And that includes the obstacle for the free flow of energy that are associated with your mental abilities, right, clarity to think clearly.

Now fasting is interesting, too, because it isn't just a physical event, although it may be weirdly enough easier to physically fast because you can stop your body from grabbing food and putting it in your mouth. But think about a mental fast. Have you ever considered that, right, it's harder because I would ask somebody, "Focus on something you love? Something that uplifts you spiritually, whether it's Jesus or God or an angel. Something that uplifts you and keep that in your consciousness constantly throughout just a day, it will be a lot harder to do if you just start that and not eating.

But what a discipline, what a discipline. This is physical, the discipline of fasting. Taking it to another level and the clarity that comes from it. So these ancient sages that talked about fasting and its impact on our spiritual focus, it's profound. We can be thrown off again by the indulgences that lead to that quick endorphin hit of that refined carbohydrates, right, instant gratification. Who needs to focus on spirit? "I feel great."

And then, you crash, right. And then, you get it hooked up in that addictive cycle. And I've seen the addictive cycle is fed by the food that is devoid of these minerals. And when I see the pancreatic insufficiencies, or the lack of the chromium, or when I've worked with addiction for people that come to me for help, and I've worked with those remedies in homeopathy, I mention that work with the pancreas and energy, we see that addiction is fed by the lack of, right.

And, of course, that lack of focus that focuses on those higher areas of our life, right, because it's not just the physical thing. But the physical thing can bring, let's say, our focus away from those areas that we feel are very important spiritually, right, the mission, "Why are we here?" It's

not just to eat Twinkies. There's more in life than that.

But, of course, the food that we choose can take us off that spiritual path, interestingly enough. And that's why I always talk about the body as a temple. What a great gift this body is. It allows us to be here and do some extraordinary things. And yet, you can go into houses of worship and afterwards there are picnics. You're just horrified by what's being eaten there. And so we've lost sight of that as much as we would pay the service to the spirit. And then, the flesh is like, we deny that that's part of the spirit. So it's another part of the story that always brings in everybody to the equation in this discussion of fasting.

Dr. Jockers: Yeah, absolutely. And so fasting for many cultures and just many of our ancestors, fasting was a necessity because food prevalence wasn't around. Fasting was also a choice for many of them. I know like the Spartans, they would fast. They would feast and famine. So they'd fast during the day, work, train, and feast in the evenings. Today's society, we've got just food constantly around us. So there's just non-stop temptation with it. And so can you contrast that?

And why would people like, for example, the Spartans want to have a lifestyle where they ate their meals in just a few hours eating window, and they would just do that feast, and then actually do their work, and have tons of energy, and have these incredibly robust physical statures and physicality by being able to do that?

Robert: Well, you think about the warriors in history. And I think about our fast-food culture. And look, we would not survive, right, because we can't go an hour without eating sometimes. And these warriors, as you describe in history, they would fast all day. They would work out their bodies. They would physically push themselves to extremes that we can't even conceive of today. And then, they would eat tremendous amounts in a setting, maybe even in the evening.

And you hear the stories about, "No, never eat after a certain amount of time." Yet, how did they do these tremendous feats of strength and vitality and last? And, of course, this is the training to the body and the body's cells that when you've got that input, when you got that inflow, you were efficient, you would use every bit of it, you would store that which you need. And your body knew exactly how to take that stored energy and convert it in a battle, for instance, that could go on for hours or days or longer. And you would constantly have access to that stored energy.

Now, there is a vital force aspect to this, as well. It isn't just purely physical because you can subsist and get nourished from the sun. That's another aspect of this when we talk fasting how you can be nourished by being out in the natural world by breathing deeply and

pulling the prana, it's called in certain cultures, a life force, in from the air itself, from the sun, etcetera. And, in fact, the source of that energy is interestingly enough hydrogen of which we also have another source of energy beyond sugars is hydrogen in the body. And where that's produced most is in the iris of the eye in conjunction with sunlight. Fascinating things that we're learning about this.

So the idea, again, of, "My gosh, we got to stop the battle now. We got to stop for lunch," you were dead if that happened. So it was a life and death scenario. Now, again, we have the luxury, most people are not in battle mode or warrior mode. But I speak on my show about the need to be prepared for those times because there's not always... There's feast and famine throughout history.

You can read it in the Bible. How do you prepare for that? We are so ill-prepared for that that if a hurricane comes through and the shelves become bare in 24 hours, people are starving. They feel like they're going to die because they've never gone a few hours without food. So I feel like an obligation or responsibility to communicate this to a culture that has lost it much like I had lost it in my life.

So now, having gone through what I've gone through, replenish the minerals, detoxified my body, gone organic and whole foods, finding that I can, indeed, go to sleep at night. Maybe I've eaten a big dinner, maybe not. But the next morning, not even hungry. I get up and drink some water. Go out and exercise. Work in my garden. Take a run or a bike ride. Come back still not hungry. It's noon. It's two. It's three o'clock, "Well, you know, I hadn't eaten today." I didn't even think about it, "Maybe it's time to eat."

That is something I couldn't conceive of happening in my life through my young years. And this has happened now. I'm over 50 and I'm doing things energetically that I couldn't do in my 20s because of adopting these principles that are sages. Our ancient ones knew and we had lost and abandoned due to technology and cellophane wrappers and fast-food drive through's. But we can change this within our lifetime, and not the whole lifetime.

It can take a matter...Well, how old are you? How many years have you been at it, right? But it won't take the same amount of years to get out of it if you apply these principles. That's the beauty. That's the miracle, right. But we have to be willing to apply it.

Dr. Jockers: Yeah, absolutely. And you hit it when you talked about efficiency. And so, ultimately, when you do do that, when you do eat dinner, and then you're not hungry in the morning, and you just continue to go on, your body starts to break down body fat and produce ketones. And you have this metabolic flexibility where when blood

sugar's up, you're good at using that for energy. And when it goes down, boom, your body's really good at using the ketones for energy, which creates that level of efficiency, which makes you just feel energetic all day long.

And you need less food and meals and things like that throughout the day. And so ultimately that creates greater resiliency. Like I love those terms, which will help us in a stressful season. And so how important is it for people to do things like fasting to help improve their mental, physical, and spiritual resiliency to the stressors of life?

Robert: A lifestyle inclusive of fasting is one that enhances what we call the metabolic Kung-Fu of every cell in your body, efficiency, the law of economy. Nature doesn't waste a thing. Man, in his arrogance, wastes plenty. And because of that, we end up in trouble. But the fasting re-teaches more our conscious bodies because the cells know what to do, but they have to gain confidence because we've gotten them fat and lazy, right, in a sense, they can snap back into it faster than our minds can.

But if we work these programs, if we begin to integrate fasting, and even in a small way, like you said, it didn't happen overnight for me, from one hour to two hours, to three hours, to four and five, to a day, three days, whatever it takes, over time, if you understand all of these concepts, you can do it with a little bit of discomfort because with any change, we can resist it. But there are ways to navigate it to minimize that for those that are willing to do so.

Some people want to jump all the way in. And that can be a lifesaving measure at certain points in time. But the concept of integrating this into your lifestyle enhances the Kung-Fu of every cell in your body and its metabolism.

And this is not just fat metabolism or sugar metabolism, it's every metabolic function that exists and some we don't even know about yet. And it's very exciting. This program can help you get there.

It may be daunting to think about fasting, even for an hour or two, much less a day or more. And I was very much in that fear place that I couldn't get through, couldn't get by. But tapping into these principles that are shared here, you can achieve things that you thought were impossible. I did. And it wasn't because I didn't do it, it was because I did, because I learned, because I adopted, because I tested it, and pushed myself a bit, but it's very exciting to know that the power to heal is yours. To one day wake up, and recognize it, and embrace it, and that your cells know exactly what to do if you get out of the way.

And part of getting out of the way is giving it a chance to recover and to stop the input. The input has been too much, overwhelming.

The abundance we have has not been of a positive nature, but the abundance you will receive from the fasting will far outweigh and far out energize anything you've experienced with the way you used to eat.

And so this is a very exciting time to tap in to something that, again the ancients knew. And it's time to bring it back out here. And if I can do it with my medically compromised body for the first 24 years of my life, and now 26, 27 years later having the capacity to go without food, without concern, my gosh, the confidence that it has brought me in my life to know I can meet any challenge, and you can do this, too.

It's not unique to me or anybody that you've seen in this video. We're tapping into principles that belong to us because we are born of creation, of a creator that gave us all of the tools we need to be well, to get well. We've just got to relearn that which we've forgotten. And this is the time, this is the opportunity. And it's a very exciting time. And I'm excited for you on your journey because you can do this and even more.

Intermittent Fasting to Build Muscle and Burn Fat

Guest: James LaValle, RPh, CCN

Dr. Agolli: Welcome to the Fasting Transformation Summit, where we are uncovering the most ancient, inexpensive, and powerful healing strategy known to mankind. Hi, I'm your host Dr. Gez Agolli for the Fasting Transformation Summit. Dr. Jockers and I had a vision on bringing this information, all these amazing speakers, to come together. So if you're joining us for the first time, welcome!

Here joined alongside me is Dr. Jim LaValle. Dr. LaValle is the founder of The Metabolic Code. He's also part and chair of the educational at the American Anti-Aging Society, which Dr. LaValle is going to be talking a little bit about, and also he's part of the founding chairs of the hall of fame of the NFL, which is fantastic.

Dr. LaValle, I just want to first of all thank you for joining me today.

Dr. LaValle: Great to be here.

Dr. Agolli: I know that you and I will be discussing a lot about fasting and different strategies. But let's just start off with a little bit about your background. I know that you started off as a clinical pharmacist, PharmD, into naturopathy, and obviously nutrition. Tell us a little bit about how you got started on this road because as a pharmacist, pretty much we are taught, "Do drugs."

Dr. LaValle: Well, it's interesting. The pharmacy school I went to, I still took courses in pharmacognosy, which is the study of plant medicine. So we had a little bit of those roots in our education. But it was interesting. I was an athlete in high school, had cousins that were actually working

with natural products that they were bringing in from Europe. And they were sales professionals to the physician market in the US. And that was in the late 70s. So they exposed me to that.

I thought pharmacy was a great takeoff point for me because, in the end, whether it's an emotion, a toxin, a vitamin, a mineral, a drug, you name it, or a behavior, all of those things affect your receptors. And the study of pharmacy really ends up being how do you affect a receptor? And that's how I got into it. I just got really passionate about how can you really make a difference in someone through changing their lifestyle, because I was an athlete and was training a lot. I understood the value of vitamins and minerals and diet because of being an athlete.

And then, look, sometimes people need monodrug therapy. It does save lives.

Dr. Agolli: There's no doubt about it. And that's one of the things we're going to be discussing here with Dr. LaValle with his experience in pharmacy. But you heard it. All pharmacists actually have very unique training. And we're talking about some of the pharmacopeia.

You talked about these receptors. And we hear that a lot about the receptors, how they communicate. In all of your experience, starting with pharmacy school up until now, several decades later, what's the difference between a natural product with receptors as opposed to just a model therapy pharmaceutical?

Dr. LaValle: Well, I think the biggest thing is that when you take a single therapy agent like a drug, it's affecting one little aspect of a receptor or a function that you are trying to address in your body. And then when you're taking a botanical usually there's a family of compounds in that botanical. And you think of it as playing almost a chord or a harmony to help your body get through that situation or condition, versus just a single note that is trying to do the same thing.

Dr. Agolli: Great analogy, that's exactly where I was going, Dr. LaValle, because what I want our viewers to understand, our listeners, by the way, that are tuning into the Fasting Transformation Summit, that there are many pathways when we use a food and when we use a mineral, a supplement, an herb, even Ayurvedic remedies. And all of these have different pathways.

Yet a drug—although, you're right, they're necessary—has one pathway. I want everybody to understand that, one pathway. And we call allopathic medicine, which I think is the greatest healthcare system in the United States for urgent care, for accident care, we have the best.

But for chronic diseases, we are not doing too good in that area. And that's why I want to bridge into this gap. From all of your experience

from working in a clinic, working with traditional doctors, what have you seen the most impact for chronic diseases?

Dr. LaValle: Oh, it's without a doubt teaching people how to eat. In general, people eat too much. They eat the wrong things. They eat too often. And they eat too late. And then they don't move enough. And they don't sleep enough. So if you start there, really getting people to understand. I always tell people when we're talking about fasting, I always tell people, "Look, let's start with something really slow. Let's try to fast in between meals."

Dr. Agolli: That's a great start.

Dr. LaValle: In general people just eat too much food. And so I think it's really important that if we can get people to understand the value of eating good food because a lot of times people think they're getting deprived. "Oh, you're putting me on a diet. And that means I don't get to eat what I want." It's like getting that impact of the value of the food and understanding how much food you really need.

We all go to the gym for an hour and work out. And we think we've got to eat six meals a day because we work out an hour of the day. When you look at the average farmer in the early 1900s, they were eating 1.5 meals a day to work a 14-hour manual labor day. And then we wonder why we have an obesity crisis.

Dr. Agolli: And those farmers seem to be in pretty good shape in the pictures I used to see. You don't see them like that anymore.

So let's just stay on that fact right they are. How did we get into this concept that we have to eat? A lot of professionals in the healthcare arena say you've got to eat multiple small meals. And one size doesn't fit all. But, Dr. LaValle, let's get into fasting because there is such confusion out there. And let's get right into it, because you've had so many years of experience on dealing with nutrition.

And from my experience in clinical practice over the years, there is a relationship. It's almost like an emotional relationship with foods and people. But I want to talk to you about your experience where was the shift for you where you thought fasting or different strategies of fasting... We're going to talk about intermittent fasting. When did you start realizing, "Wait a minute here. I've had an epiphany." What happened with you?

Dr. LaValle: Well, for me personally, when I was training for competitions, I would always know how I'd have to restrict my food in order to cut for a competition. But I think in general because I had a lot of experience in the diabetes care side and my whole family was

diabetic, it was really an area of passion for me to work with people with metabolic syndrome. I just saw that people were eating too much too often.

And it's interesting. We don't appreciate enough that sometimes it can be stress that causes us to eat. So we have an emotional connection to that food. "Hey, I need some comfort food. I'm rubbing that cookie on my head. I'm not even eating it. I'm literally trying to fix my brain." And then there's that thought of people, like you said, they get taught, "Oh, you should eat several small meals a day so that your blood sugar doesn't drop." Well, my point to that is that's like putting a Band-Aid on a bullet hole. If your blood sugars drop, then there is another problem.

So I think that for me, I saw, first of all when you hear about things like time restricted eating, I think there is another really big technical term for that. It's called three square meals a day.

Dr. Agolli: It is regimented. Mom says three square meals a day, a couple snacks if you want. And before you know it, we turned it to gluttony.

Dr. LaValle: Exactly, exactly. People used to eat, even under very active lifestyles, they would have a breakfast. They would have a lunch. They would have a dinner. And that would be it. You have dinner at 6 PM, and it's over. And now we've extended all that. And it's really more complex than just, "Oh, did I eat three times a day? Or did I eat two times a day?"

The problem you get into when you eat too late is you throw off your circadian rhythm, as well. So what I like about why fasting has come to the forefront of us discussing how do we maintain health is I think it's helping people to learn how to regulate their eating patterns, as well, because their circadian rhythm or the rhythms of our hormones that get released during the course of the day and night, we also have a circadian rhythm of food so that we should be taking in food during the daytime hours and not taking in food during the nighttime hours. We should be repairing and detoxifying at night. And in the daytime, we take in the nourishment that we need.

And I think it's great that this awareness has come up. Now, there's obviously as you said, there's a lot of different strategies out there that are being discussed.

Dr. Agolli: And I want to talk about those strategies. And for those of you listening to the Fasting Transformation Summit, we've got an expert here. This is a bonus program right now because I really want to hone in on what Dr. LaValle said because he had a personal vested interest because his family was diabetic.

And, Dr. LaValle, the research I've done, the last report that I pulled up

from the CDC, the centers of disease control, 30+ million Americans are actually diagnosed with diabetes. We used to call it adult onset. It's not adult onset anymore, typically after 40. It's anybody pretty much from we are seeing 18-year-olds getting type II diabetes. And about 10% have type I, which is totally different. There could be a genetic component to there. We've also seen some different viruses that can affect the pancreas. We'll talk about that. Now, 90% are type II diabetics.

And what's interesting, the CDC is now reporting, you're talking like 78,000,000 to 80,000,000 total diabetics. So like 50 million don't even know it because they're right into that buffer they are and they've got prediabetes. If you've got prediabetes, guess what happens? You're going to get diabetes unless you do what? Intervene. And fasting is one of those strategies.

So I want to get right into the mechanism. Let's get right into the mechanism because when we talk about hunger, we know there's a connection with food. And there's an emotional connection. There's also relational connection because when we eat and fellowship with other family members or friends, that's a great time to celebrate that food. The problem is we've taken that and we've just gone the opposite direction. In addition, some people eat by themselves, fast food, convenience. They're not digesting properly.

And what I want to talk to you about with the diabetes is that we know that there's a lot of these different receptors. We can call them adipokines. I want to talk a little bit about these adipokines, leptin and adiponectin, when it comes to diabetes.

Dr. LaValle: Sure. Well, the big thing is that the more you become overweight, the more visceral fat, organ fat that you pack in. And fat around your heart, epicardial fat that you pack in around your heart, that fat is a metabolically active organ in your body. It's actually secreting chemicals.

Now, it's interesting. It's releasing chemicals that are taking you away from health. So, for example, you mentioned a term *adiponectin* for people that are listening. Adiponectin is this compound in your body that turns your insulin receptors on. And it's actually a marker for what your rate of rusting is. So if you want to think of how I'm aging, think of it as your rate of rusting. The lower your adiponectin, the more you're rusting in the less your insulin receptors are working.

Now, why is that so important? Because the quicker I'm rusting, the more I'm aching, the more I'm inflamed, the more my tissues are getting damaged, the more my blood vessels are getting damaged. So it's creating an accelerated aging process. So adiponectin, when we fast or even when we do things like an intermittent fast or look at fasting mimic diet programs, there's an up regulation of insulin receptor sensitivity.

And part of that is due to that adiponectin coming back on board, that you are actually turning that on. You're also burning off that visceral fat.

The other thing that's important, yeah, you can become leptin resistant. A lot of people that are overweight, they have really high leptin. And leptin is supposed to help you satisfy your appetite, help manage your fat mass production, how you're going to be. The problem is, your leptin receptor gets resistant to hearing the leptin. When we fast, we wake up our receptors so that we hear that signal. And now our body can start to function the way it was meant to.

Dr. Agolli: So I'm really glad you are talking about this because these adiponectin and leptin, they're really adipokines, as Dr. LaValle talked about where we have that visceral fat, that really bad fat that's sending these chemical messages. There really actually cytokines, which is really actually very interesting.

And the reason I say that is it all boils down to how the body metabolizes. And I remember in medical school, one of my professors basically said, "When you have too much sugar, glucose, outside the cell," the comparison he gave us is like having orange juice on a wooden floor. Take your socks off and walk on it. Guess what happens? Sticky. Sticky proteins.

You heard what Dr. LaValle said, that the body is rusting because of this visceral fat. And that's what's happened. Imagine that stickiness. That stickiness is happening in your cells. So this is why we're seeing increase in cardiovascular disease. We are seeing increase in kidney disease. We are seeing increase of eyesight problems, even blindness. We are seeing wound that cannot heal properly, lower immune systems.

And the ultimate goal that we have seen with fasting, that can begin to start to change that adiponectin. And you talked about leptin resistance. When cytokines actually were discovered, or adipokines, it was probably the early 1990s, 1994, I believe. And I thought it was the greatest discovery, until they got stumped with leptin resistance. And that basically means it's almost like insulin resistance.

I want to shift to the insulin resistance. With your experience working with a lot of diabetics, is it something that you've seen?... And I hate to use the word *cure* because we believe the body can cure itself, whether it's traditional medicine or integrative medicine, we facilitate that healing. But have you actually seen type II diabetics totally reversed?

Dr. LaValle: I absolutely have. I've even had type II diabetics that haven't been on the beginning of their insulin pump, and we've dramatically altered their need for insulin, even when they're type II.

I think the big thing to keep in mind is you have 38% of the US

population is insulin resistant. So it's important to understand these concepts. What am I going to do to break that? Because nobody thinks that they are going to be the one that has a heart attack or has kidney disease or ends up blind. Or one of the biggest things that happens that people really aren't familiar with, but when your insulin resistant and you are diabetic, you are at a way higher risk for the eight most common forms of cancer.

And so you have to think of once your diet is out of control, you're gaining weight, the visceral fat is loading in, you're pumping out too much insulin... And insulin is there trying to get glucose to get into your tissues, but it's not doing a good job, so you make extra of it. So that's insulin resistance. You make more insulin. When all that's going on, you are literally taking your metabolism and pushing it off a proverbial cliff. You're losing control of your health quotient, where you are going to land as you age.

Dr. Agolli: It's fascinating. And I've seen the exact same thing in our practice, as well.

So we're sticking with the diabetes just for a second, specifically type II. And we hear this terminology *gluconeogenesis*. And I want to get right into a lot of individuals are fearful that if they're not eating regularly, their glucose drops and their insulin is not working properly. So what do you say to the strategy? We've got a brand-new person that wants to just begin fasting. What would you recommend for a diabetic patient?

Dr. LaValle: Well, I think the first thing is I like to get them on, make sure they have enough magnesium on board, enough chromium on board, enough to zinc on board. Many people that are insulin resistance are just folks that really are overweight and chronically unwell. They're just flat out mineral deficient. And you need to minerals to make that insulin receptor work. So I'm a big fan of people getting on some minerals so that they can at least have those on board when you are starting to change this.

The other thing is that you can begin with—and it really depends on, we are casting a very wide net—how reactive are they in terms of their type II diabetes if they were a diabetic? Are they dipping dramatically if they go more than three hours without eating? Are they just slightly hungry? There is a wide scope of that with individuals.

The first thing I do with people is get them to extend their morning hour if they can from where they eat. So typically it's like, "Hey, you don't have to wake up right away and eat. If you're not dizzy and your blood sugars are good, get a little break."

And then the other piece is just getting them to look at you can do ketones in the morning if you want. So you can do a drink of ketones.

I have people—we call them fat bombs—but we have people make a macadamia nut, MCT oil frozen cluster that they can eat it actually if they want to. So they can start out with that if they'd like.

I'm really sensitive, though, depending on how fragile they are, as to what they do. And so we just want them to make sure that they're tracking their blood sugars is there someone that's sensitive enough for their blood sugars, and then really start to take out all the refined carbohydrates. I always start to look at what kind of grains they're eating, get those cut down as much as possible. I prefer if they go gluten-free. Get the grains out as much as you can.

Fasting, once again, there's a big subset. You can do a morning fast. And typically what you'll see from a morning fast is metabolic benefits. So when you think of intermittent fasts, five days of normal feed, two days of a reduced calorie feed, say, Monday, Thursday, you're at 500, 600 calories, depending on if you're a woman or a man.

You're going to lose weight. You're going to see some changes in a lot of your blood values. You may not induce something like autophagy because autophagy is the big thing if you are doing 3- to 5-day fasting.

Dr. Agolli: I was going to get into autophagy on that.

Dr. LaValle: Yeah, that's a different animal you're going after. You're going after cellular renewal then. But if you're just trying to gain control of your metabolism and eat less, get that morning meal out. Get some lipids or some ketones into that morning meal. And then have a responsible lunch and dinner where you're eating proteins, vegetables. Get some fats in. Avocado is wonderful. Try to get that in twice a day. And I try to get people not to eat after 7 PM.

Dr. Agolli: That's great advice, by the way. And I want to get into that. That's how you get started is by just possibly skipping breakfast. When we hear the word *breakfast*, it's break the fast. And what's happened is in this society... And I'd love to talk about digestion because you know the old saying, "You are what you eat," that's not true. You are what you digest, absorb, and assimilate at the cell because the body needs these nutrients that Dr. LaValle is talking about. Minerals are the sparkplugs of life. I'm so glad that you put all of your clients and patients on these minerals.

But getting back to the mechanism, and one of the reasons I have a passion of talking about diabetes is it has become such an epidemic. If it's done properly, yes, you can reverse it. I'm not going to use the word *cure* because no doctor, no practitioner can cure you. Your body was designed from a higher being, from God, to create that innate ability to cure itself.

But when it comes to this relationship with food, there's a hormone we haven't talked about yet, which is kind of my favorite hormone. It's called ghrelin. And this ghrelin, a little different than what we have with leptin, because that's going to the adipose tissue. This is actually inside your stomach. And that ghrelin actually is going to tell you to eat. And scientific evidence is revealing that ghrelin is the lowest in the morning, which is extremely low.

And I always wonder, when I was growing up, coming from a family from Europe, my mom, "Eat! Eat!" nonstop. Even my kids, stop. It was just really overwhelming. But in the morning, I just didn't want to eat even as a child. And when I ate, I didn't feel very good. And when I started utilizing the benefits of fasting and breaking that breakfast and not eating, whether I'm going to have a good fat, MCT, macadamia, coconut, whatever you want, with coffee or water, I noticed a huge difference, Dr. LaValle.

So I want to get into the ghrelin as well and its symbiotic relationship because just the opposite. At 8 PM is the highest level of ghrelin. This is what you feel when you had that ravenous appetite. And you're talking about shortening that window. I want to get right into the window. Do you get into the hours with your clients?

Dr. LaValle: I give them guidelines. Here's the problem you have. I go to New York and I set up a weight loss program for a gym in New York City right in the heart of the theater district. Do you think anybody is eating dinner by 8 o'clock at night?

Dr. Agolli: No, try nine or 10 o'clock.

Dr. LaValle: Exactly, right! It isn't happening. So you've got to adjust a little bit because sometimes it's hard. But in general, what I try to get people to understand is that we really were built... Just like hormones, ghrelin is low in the morning and it's highest at night. Eat before that ghrelin's going to peak because what happens if you don't? You can't stop eating.

Dr. Agolli: You're ravenous.

Dr. LaValle: How often do you see people that they just say, "Oh, my gosh. After 6 o'clock, I just graze all night. I can't stop picking from the fridge, from the cupboard." And so I like to try to get people before that ghrelin actually goes off and peaks, have dinner.

Dr. Agolli: What do you do when someone is struggling and they really want to make an impact and change in their health realm and be productive and functional, full of vitality? When they have these real hunger pains, they are real. We all have developed this ravenous appetite. And it's even more so than... I want everybody to understand,

it's not even a lack of discipline. It's got a lot to do with, as we are talking about, these different hormones and adiponectin and these chemical receptors. But what strategy would you give one of the clients and your patients around when they get hunger? What do you tell them?

Dr. LaValle: Well, first of all, are you getting lightheaded? Oh, you're not getting lightheaded, so your blood sugar's not dropping. You think you're hungry. But maybe you are thirsty. So I try to get people to drink more water because a lot of times your brain is telling you you need to drink. And instead you're interpreting you need to eat. So that's one thing.

The next one is I like to try to get people to understand are you eating because

of stress? Is this a stress-induced behavior? Because basically comfort food, you're going to trigger for stress. So you're going to look for sweet, salty, and crunchy. "Where's the chocolate covered pretzels dipped in caramel, wrapped in bacon?" That's what people are going to go for.

And so if it's stress induced, then I have to teach them some strategies about, "Well, maybe try doing deep breathing twice a day for three minutes." Or it's even on your stinking watch.

Dr. Agolli: So this is the complete package?

Dr. LaValle: Yes! Exactly.

Dr. Agolli: So you're hearing some great professionals here at the Fasting Transformation Summit. Joined with us is not only a leader in integrative, functional medicine, but also a great author. How many books have you written now?

Dr. LaValle: 20.

Dr. Agolli: 20, all right. Only 20! So Dr. LaValle, one of my favorite books was *The Metabolic Code*. And I think that's fantastic, by the way. In the book you talk a little about that. But what's really interesting is that we're talking about all these different hormones.

And I want to jump right in now with the strategy, which water is fantastic, H₂O. I know that a lot of individuals know the benefits of water. But getting them on the strategy, especially when they're fasting, besides helping with the hunger, what else have you seen? Are you adding minerals to the water?

Dr. LaValle: Well, for me, in general I have people when they are doing a program with us for weight loss, I'm like, look, I can tell you right now. I've had cases where I've corrected for their hormones, corrected for their stress, corrected for their food allergies, corrected for their thyroid, corrected for their environmental intoxication. And until I had them

reduce their food to the point of doing a morning fast are doing a fasting mimic program, I couldn't break the cycle of their fat gain. I couldn't get it to go.

Dr. Agolli: That's powerful. That's powerful.

Dr. LaValle: I'm just saying. And I kind of know. I teach thousands of doctors a year how to do personalized care. And so eating this way is incredibly powerful as a way to break metabolic roadblocks that keep you from getting to that fat and getting your weight off and creating a stable weight loss, one that you can maintain over time.

Dr. Agolli: That's a powerful, powerful statement. If you guys are listening for the Fasting Transformation Summit, this is very powerful what Dr. LaValle said. Until he started using the strategy, whether it's just a simple fast, whether it's a 4- to 8-hour eating window, or it's going to be fasting mimicking, which is going to be our next topic we're going to get into, you break that metabolic cycle. You stop it in its tracks. And your body can reverse.

And that's the great thing about this. We've actually seen the cells becoming healthier, younger from a biological perspective. It doesn't matter chronologically what your age is. Listen, I've seen patients coming in in my 25+ year career that to literally, you look at their age, and you're like, "Oh, they're are about 50." And they come in and they're like 25. That's a lot to do with what we're talking about: oxidative stress, glycation, poor metabolism, having that visceral fat.

I start to call this dia-besity now, which is important. So I'm so glad you made that powerful statement about until you started using the fasting strategies.

Dr. LaValle: And the big thing that's interesting is the reason you want to take in fat in the morning—I don't think we've told everybody this—but the reason you want to take fat in in the morning, it fools your body into thinking you're still fasting. So when you take it, use MCTs. Use the butyrate ketogenic powders and those types of things. Your body still thinks that you're in fasting mode.

Dr. Agolli: And you still get the benefits at the cellular level because of that.

Dr. LaValle: But yet you get some nutrients so that your brain can wake up because when you wake up in the morning, your brain needs to function. So you can use these types of novel lipids and ketones to help fuel the body.

Personally, what I try to do with folks is I probably have them three days a week, they do a breakfast. And it will be some type of gut repair

because most of my folks coming to me need their gut repaired. So they're drinking morning shakes that are gut restorative and healing. But then I have them doing four days a week where they are trying to eliminate or not to utilize breakfast other than just taking some fats, taking some ketones, try to tread lightly.

Now, if it's my athletes, that's a whole different story because I work with a lot of professional teams. And we even deploy fasting tactics with athletes, especially before the season, and after this season because it actually stimulates stem cells and helps them repair their tissues.

Dr. Agolli: Yeah, that's awesome. Stem cells have been researched now. We are born with like 100 trillion stem cells. And, of course, as we age, what happens? We start to lose them. And when you are a high performance, whether you're a weekend warrior, you need to have that good stem cell production, which we've seen, as well. And our stem cells originally come from our bone marrow. But we are seeing fascinating research with stem cells.

And the research I've seen—and you used that word at the beginning of our conversation, *autophagy*—and autophagy actually is an area I want to focus on a little bit right now is because when we look at having all these athletes and all these high performers, you want them to start repairing so they can go ahead and do their exercise, which we know is very important.

But when we talk about the cells and the autophagy, what other benefits have you seen? Because USC has done studies on this, as well.

Dr. LaValle: Oh, quite a few. So USC actually, it was interesting. They knew there were benefits to fasting. So they were trying to get patients to fast before chemotherapy, actually, because they saw better outcomes. But the problem that they had was that people a lot of times when you do a fast and you absolutely have no food, it's very difficult on folks to do that, to accomplish that.

So they developed what was called a fasting mimic diet, which was a five-day diet of certain foods that you eat. It was low protein. And the goal of it was during these five days, it would mimic the effect of a five-day fast. But it's interesting. What do you do the other 25 days? That's what I think is interesting. What we've been talking about, I like to deploy is an everyday strategy.

What I like about what they developed was that they've shown that what happens is when you go into a fast, you trigger two things to go down in your body. One is called mTOR. And you can think of mTOR as what makes you grow. It makes your muscles get bigger. It's anabolic. And then another one is called IGF-1, insulin-like growth factor. And that goes down.

Now, when those go down, it triggers your immune system to allow your body to clean up all the waste proteins basically, or the refuse in your body. So your immune system gets out basically a vacuum, cleans up all these waste proteins in cells, which triggers less inflammation, gets your immune system back on board. It also triggers the production of stem cells.

Dr. Agolli: So you're getting all of those benefits. This is what the research shows. And this is really powerful, what Dr. LaValle is talking about. We are talking about USC. And USC is doing great research on the benefits of fasting.

And I read the exact same study you are talking about with the cancer. Cancer is the number two killer in the United States. As a matter of fact, when President Nixon had his second inaugural speech, I believe it was 1973, he declared war on cancer. I remember that. And he said at that time, one in seven Americans were going to be diagnosed with cancer and succumb to this dreadful disease. "And we're going to fight."

And let me just tell you being a former military of the United States Air Force, when Americans go to fight, we strike hard. We fight with honor, vigor. And we are very formidable. So when an American president says that for the first time—I forget how much he allocated, whatever the billions were—what is it today? Fast-forward over 40+ years, it's one in three in women, and one in two in men will get cancer. So we've spent all this money where we are looking for the cure for the Big C.

And you know what's interesting? It doesn't even exist because cancer is multi-factorial. And the reason I'm saying this, this one study at USC talks about how effective using fasting before chemotherapy. Now, if you're listening to me and you're under the care of an oncologist, please talk to your oncologist about this. Or better yet, find an integrative practitioner that can assist you with this.

But, just fasting, like you said, the studies show that a 48-hour fast, which is hard obviously, it actually helps mitigate 50% of the damage from chemotherapy. See, chemotherapy is an amazing drug to kill cancer cells. But guess what it also does? It has collateral damage at the body. And this is what you have to understand. It's about going after the cancer and then repairing, as well. And that's what I love about the cancer. And I hope that we can have other academic institutions look at this really hard, and we start to train all of our oncologists because this is powerful information, Dr. LaValle.

Dr. LaValle: It's just do you want to better results? Or do you want mediocre results? If you want to better results, you deploy tactics like fasting, intermittent fasting, fasting mimicking, intermittent feed. There's all kinds of ways that we can begin to target improving our metabolism.

And I think the other thing that's interesting...And I'm actually doing a trial on this. I'm designing it right now, is we are going to take people through five days of fasting mimicking. And then at the end for performance we are actually going to feed a higher protein diet because our feeling is anecdotally we've seen this already that you actually gain more lean mass coming out of that because what happens when you re-feed—

Dr. Agolli: That sounds counterintuitive!

Dr. LaValle: I know it does!

Dr. Agolli: I know it does. I've seen it myself and I've read certain studies that fasting properly, like Dr. LaValle is talking about, fasting mimicking or intermittent fasting, believe it or not, you start to develop your own growth hormone quite significantly. Is this what you found in the research, as well?

Dr. LaValle: That's exactly right. And in the research it says in a re-feed state...So if you're in a five day fast, the re-feed state your growth hormone and your mTOR goes up. And why mTOR is important, you can think of mTOR as being the brick layer. And what the bricks are, are branched chain amino acids. And amino acids, why branched chains are important is that they are the amino acids that are building blocks for your muscle tissue.

Why is it important to have muscle tissue? Your muscle tissue is the currency of your aging process. The more lean mass that you can hold onto, the better your metabolism will perform as you're aging. That's why these types of tactics like fasting and intermittent fasting, fasting mimicking diet, keeping yourself lean, reducing the amount of fat that you're putting into your muscle because we lay fat in between our muscle, it's critical because your aging process is going to be dictated by how much lean mass you retain.

Dr. Agolli: That's very, very important, especially we are seeing a high rate right now of osteopenia leading to osteoporosis. And we're seeing unfortunately a lot of elderly population that you hear about them breaking their hips. It's so fragile. It's so fragile. And then they are lacking. Daniel Rudman, M.D., actually was one of the first physicians in the 80s—I believe it was the University of Michigan—that did the studies on exogenous growth hormone. They took them from cadavers. And they put them in... Unfortunately, they didn't screen properly. But that's a different topic altogether.

And the studies were just amazing. Lean muscle tissues, when you are talking about, tightening of the skin, strength was unbelievable just from that. So any strategy that you can employ to increase that natural growth hormone release, you're going to benefit from it. And it appears

to be that the fasting strategies are doing it.

Dr. LaValle: Yeah, they do. And, once again, when you're looking at a cellular effect, so the cellular effect that occurs, for autophagy, for stem cell recruitment, you get that attitude that 3- to 5-day period when you're fasting. But that's what they've shown with fasting mimicry, as well.

What I like about intermittent fasting is that people can do that pretty easily, too. So I think you have to almost help them fit the lifestyle that they need. I know for you, Dr. Agolli, you're really comfortable with a noon to seven window or a 1 to 7 window, if I remember right. I'm pretty comfortable with that, as well. Not everybody is there. So if I can even get them to, say, two or three days a week to reduce their calories down to 500 calories or 600 calories, at least at that start point, like here's where you start. So you begin to change your metabolism over. I think it's a win.

I'm not as big of a fan—this is just my personal bias; I don't know about you—but the every other day fast where you eat... You tell people, "You eat at libitum," which means just eat whatever you want, or the next day you're supposed to eat 500 calories—

Dr. Agolli: I'm not a big fan of that either.

Dr. LaValle: Up one day, down one day, I'm not as big a fan of.

Dr. Agolli: I think it causes too much stress to the body. And the body hasn't had an opportunity to adapt. This is all about adapting. The human species can just adapt into so many different austere environments. And I just consider that causing more physiological stressor. I'm sure it can have some benefits from a discipline perspective. But the best results I've seen are exactly what you're talking about: fasting mimicking. It could be five days where you can have anywhere from 800 calories—

Dr. LaValle: Yeah, it's 770 to 1,100.

Dr. Agolli: And then also, myself, I'm a big fan of that 16-8 window. So really I'm not telling individuals to not have as many calories or the density. We are just changing the eating window. And, now, when it comes to certain individuals, I've seen a really good results with 24 for those really, really difficult metabolic cases.

And here's the interesting thing, Dr. LaValle. And I want to get your opinion on the exercise. There is certain research that talks about an hour before you break that fast, if you still have the energy to... Believe it or not, when I do it, I do have a lot of energy. And right at that particular time, you're just getting a tremendous amount of benefits of not only

melting that adipose tissue, but your metabolism kind of kicks in. So what's your thought process when someone is beginning fasting with exercise?

Dr. LaValle: Yeah, well, I think is ideal actually because what they have found is that you have better, what's called, tissue anabolism. You get better anabolic drive in your body. You burn fat more effectively. You actually get to better growth hormone release when you train in a fasted state.

I always laugh. When people are trying to lose weight, they don't need to drink a pre-workout drink and drink something while they're working out and drink after. You're never going to get the weight off because you're telling your body you've still got plenty of nutrients here. So no need to get to that fat.

So, once again, it depends on your goals. I usually break it down like this. If you're training, if your goal is longevity that's one application. If your goal is performance, if you're an athlete...I've got athletes that are hockey players. They're spending five hours a day on the ice. They need to eat. But if your goal is weight loss, man, training in a fasted state in the morning—

Dr. Agolli: It's powerful.

Dr. LaValle: It's a very powerful method, especially if you can, after you're done with your workout, you can take in some fats or you can take in some ketones, you can help yourself get the energy and vitality you need to get to that noon hour when you're going to get your first meal.

Dr. Agolli: I couldn't agree with you more. So I want to shift our conversation. And we're going to move it from diabetes, which is a big part of the metabolism. I want to get into supplementation because we talked about minerals before. You talked about your magnesium, your zinc, your chromium, your vanadium. All these are wonderful, especially magnesium. Magnesium is so important because there's so many drug nutrient interactions and deficiencies caused by these drugs. And I know you wrote a book on that, too. So I want to give a plug for that.

Is there any other supplements that you highly recommend while someone is changing into the intermittent fasting?

Dr. LaValle: Well, there are several things that they could do. I think things like carnitine is always beneficial because it can burn fat. I love MCT is great, so medium chain triglycerides are great. It's a source of fuel. Getting some essential amino acids and branched-chain amino acids in, that's great because once again that's going to help your body stay anabolic, maintain lean mass. Remember, muscle is the currency

of aging and the currency of your metabolism. So getting some amino acids in can be really beneficial.

And I always like adaptogens. When people are under chronic stress, when their body thinks that—

Dr. Agolli: What's your favorite? Ashwagandha?

Dr. LaValle: I love ashwagandha. I like rhodiola a lot. I like cordyceps a lot. So all three of them can be incredibly powerful. I love cordyceps and ashwagandha because ashwagandha helps with thyroid function, which when you're gaining weight, you lose thyroid function. And cordyceps is incredible in terms of helping to improve energy production in your body, help you to hold onto oxygen in your body. I really like it.

Dr. Agolli: So we're talking about mitochondria, ATP production.

Dr. LaValle: Absolutely. We've got to stoke the fire. The bottom line is we've got to get those powerhouses back on board in your body. And that's one of the things about fasting that we haven't mentioned yet. And I know our time is short. But just realize when you're fasting, you're also triggering mechanisms that help you to get your mitochondria, which are the powerhouses of your cells, to function more effectively and to get more of them working.

So people don't realize this. When your metabolism gets sluggish, when you're insulin resistant, you could have 40% to 60% less mitochondria functioning in your body. So of course you feel more tired.

Dr. Agolli: Absolutely. And we know right now with the advent of a lot of these Frankenstein foods, I called them, because you've got high fructose corn syrup. You've got tons of GMOs because we really haven't done research. We need real food.

Dr. LaValle, our last few minutes. This has been a great interview, by the way. I just want to ask you, what other words of encouragement? If you have a brand-new individual out there, regardless of whether they're just looking for peak performance or just prevention, what words of encouragement would you do when you have other people say, "Oh, if you don't eat, you're going to die." You hear this a lot. "You've got to eat!" No, you actually don't need to eat. All of these big manufacturers in the United States, the food manufacturers and fast food, of course they want to tell you that. Of course. And may even have these chemicals that actually affect ghrelin and leptin. They're all out there. We know that because this life is about chemistry. What advice would you give to encourage?

Dr. LaValle: First of all, I would say lobby the food lobby to put more broccoli commercials on because I don't see any broccoli commercials. I

just see big burgers and lots of pizza and lots of sweets!

So be realistic about what your goals are. First of all, if you're sedentary most of the day, chances are you probably don't need to eat a lot in order to get through your day. Establish what you want. I always talk to people. What motivates you? If you're saying, "Hey, I want to lose weight because my wife told me so," probably not the best reason. Figure out what's important to you. Understand that, no, you don't need to eat six times a day. In fact, the more you eat, the higher you pump your cortisol, the more you're going to make yourself make more insulin. So going six times a day is probably pretty counterproductive.

And just really start to understand that being a little hungry might be good. It's okay to feel that hunger a little bit. Since the beginning of time, until we had this industrial revolution in farming, people were a little hungry. And we didn't have the problem with weight.

Dr. Agolli: Absolutely. And since you're saying that since the beginning of time we've been employing these strategies, even from a spiritual perspective, every major religion talks about fasting. What's your opinion on that?

Dr. LaValle: Well, literally, every major religion looks at fasting. And it's a part of a spiritual rebirth and a spiritual growth process. I think there's something to testing your mettle. And it's hard when everywhere you go there is food because your brain—

Dr. Agolli: Lots of temptation!

Dr. LaValle: Your brain is saying, "Look, I don't know when the next time we're going to get to eat is. You'd better grab that bowl of M&M's and love on it." So I think it's just important to understand that fasting has been around forever. There were periods of time in winter months when you had less food and had to go with less food. And at the same time, pick foods that are healthy. Get nutrient dense foods as best as you can because you want to be able to get those vitamins, minerals, and nutrients that are needed, not necessarily as calorically dense, but more nutrient dense.

Dr. Agolli: Great advice. There's no doubt about it. Hey, when you listen to Dr. James LaValle, just an expert, he's been around for several decades—even though his age doesn't look like it. That's because of the fasting techniques he uses.

Dr. LaValle: When I turned 80, I'll tell you, that's when things started to slow down for me! *[Laughs]*

Dr. Agolli: Absolutely. We've only got a couple minutes left. And now is a great opportunity to share in talking about really just busting the

metabolic disease. This is what fasting can do, all variations of fasting. One size does not fit all. One size does not fit all.

I need to ask you, though, because you are an expert from a diagnostic approach. When you're looking at wellness and you're looking at strategies, what kind of testing would you recommend?

Dr. LaValle: Oh, wow. That's a great question. I think testing for food sensitivities and intolerances today has become incredibly important. More and more people have—I hate to use the term “leaky gut”—but as long as we've been around, for 30+ years we've been talking about this issue of the intestine becoming more and more sensitive. More and more people have allergies. More and more people have autoimmunity. So that type of testing is really important.

I wrote a book called *Your Blood Never Lies*. Look, knowing your glucose, knowing your insulin, knowing your triglycerides—

Dr. Agolli: By the way, it's a great book, *Your Blood Never Lies*. Great title. And that's why I was asking you about the testing because some people will say, “Well, I don't want to go to a doctor.” But there's even ways you can do testing without going to a physician. But that's what I want to ask you. So you said food allergies, food sensitivities.

Dr. LaValle: Yeah, that's important. You can get your blood pressure taken. You can do a finger stick to get your glucose. You can do your glucose when you are fasting. You can wake up in the morning and take it. You can take it an hour or two hours after you eat. And the more that number goes up after you eat, the more you know you may either be eating too many carbs and sugars, or you may be insulin resistant and you're not able to take on that carbohydrate load that you've got.

Dr. Agolli: So what impressed me about your book *Your Blood Never Lies* is that we went into the glucose. A lot of individuals go for their annual checkup. And what do they do? They get their basic testing. The doctor does cholesterol. He does something called complete blood count, complete metabolic profile. And then they look at the glucose.

So let's talk about it because you taught me something very powerful on a percentage basis.

Dr. LaValle: Well, it's easy. Normal is 65 to 99, “normal.” But a study that they recently—I don't know, the last five years they published it—for every point over 84 represents a 6% risk for becoming a type II diabetic in the next decade.

So if you have a 92 blood sugar and you walk into your doctor and they slap you on the back and go, “Good! You've done a great job! You're in the normal range,” you're not diseased yet. But are you at your ideal

potential for your health? So at a 92, you would have is 7×6, a 42% risk of being a person with type II diabetes in the next decade, just at a 92, which is completely normal.

Dr. Agolli: And even though you walked into the office, No fault of your doctor. Harvard doctors stay up on all this research. And you're telling me what appears to be normal actually isn't because you've got a fortysomething plus percentage of potentially getting—that doesn't mean you're going to get it—but if you do nothing, you're going to get it.

Dr. LaValle: Right, and, look, that was a Kaiser Permanente study on some 47,000 lives almost over a decade. So it was a really well done study. The bottom line is we know now if you're listening to this summit and you're 20 pounds overweight and that weight is around your belly, and you're tired midday, and your joints are aching a little bit, and maybe you feel like your short-term memory is starting to go on you a little bit—"I'm not as sharp as I used to be;" it's because your brain is not using energy like it should—if you are lining up like that, you've got to take action.

And one of the quickest things that you can do that's not costly—there's not a lot of expense to it—is you can deploy fasting tactics, whether it's intermittent fast or five and two. It can be the 16-hour fast, the eight-hour window to eat. It can be deploying fasting mimic diet, five days a month, and then deploying a 12- to 16-hour window the rest of the month. But you don't have to do a thing other than change your eating behavior. And you can change the way your body looks, the way your body feels, and the way your brain thinks. That's pretty powerful.

Dr. Agolli: That's powerful, Dr. LaValle. Hey, you just heard from the expert, Dr. James LaValle, father of The Metabolic Code. He's part of the chair educational at the A4M, the American Anti-aging Association Academy, just a great research they've done over the past 25+ years.

And what's interesting is that he also works a lot with athletes. He was part of the NFL Hall of Fame. And what we have to understand is that what Dr. LaValle is talking about is by just taking these steps, your body can actually respond favorably. We have study after study. This Fasting Summit is to share ideas about fasting. One size doesn't fit all. So if you've got someone who says, "You never should do this," everybody is different.

Now, I do have one last question. And then we are going to wrap it up here, Dr. LaValle, because a lot of individuals ask, "Is there anybody that shouldn't fast?"

Dr. LaValle: Well, I think people that are underweight. So if you're underweight, depending on what type of fasting your deploying, you shouldn't maybe not fast, which we're talking about a five-day fast. I

think over the age of 75 I'd rather have people do time-restricted feeding versus doing fasting because what we found is that people over the age of 75, we really want to make sure they maintain their lean mass. They can be a little more fragile in terms of keeping their lean mass on.

But in general, everybody benefits from looking at the amount of food they're eating, creating a time restricted eating pattern to it, and then just to be more responsible about even taking days off, like in a religious event, and giving your body a digestive rest. So I think for most of the population, they can benefit from it.

Dr. Agolli: Powerful words of advice from one of the experts. Digestive rest is really, really important because your digestion is the key. And healing that gut is the key.

Listen, guys, we are so, so glad you joined us this year for the Fasting Transformation Summit, where the most ancient, inexpensive, and powerful healing strategies... And I think during this interview we've uncovered some of the most powerful healing strategies. Dr. LaValle, author of 20 books, the founder of metabolic code, teaching thousands and thousands of physicians. This is really exciting. And about, being the chair at the A4M, which is fantastic. I really want to thank you and just to give you a last opportunity to say whatever else you want as we wrap up this interview for the Fasting Summit.

Dr. LaValle: Real simple, don't accept anything other than feeling the best you can. Reach for the best vitality that you possibly can have in your life because it's going to make everything else in your life better.

Dr. Agolli: Thank you, Dr. LaValle.

And, listen, if you're listening to this series on the Fasting Transformation Summit, you can go ahead and take advantage of being part of this and listen to all of these great interviews that Dr. Jockers and myself put together, just a powerhouse of knowledge. Everybody has different opinions. But we have one common goal. And that's one common goal is to help you live a long, healthy, productive, functional life one cell at a time.

And this is what the power, when you really tap into the program that you want with with intermittent fasting, fasting mimicking, even a long-term fast we've had experts talking at the Fasting Summit where we actually abstained from eating food for five, seven, even 21 days, just having water, the body is powerful. Don't do that type of fast unless you're dealing with an expert. But we know there's all kinds of fasting. The key is to take that first step and to get into the journey of wellness utilizing fasting. It'll change your life.

Thank you once again, Dr. LaValle. I really, really appreciate it.