



LET'S "TALK" ABOUT **SUGAR!**

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Sugar's Contribution to Heart Disease

Steven Masley, MD, FAHA with JJ Virgin, CNS, BCHN, EP-C

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Dr. Masley: Well, welcome to the Healthy Heart Summit—I'm Dr. Steven Masley, your host—your chance to learn from international experts on how to prevent and reverse heart disease. And I feel blessed to have our speaker today, internationally renowned, wonderful colleague, someone I have known for years. We took our nutrition training courses together, I won't say how long ago.

We have today JJ Virgin, celebrity nutritionist and fitness expert. She helps clients lose weight fast. She is the author of 3 New York Times bestselling books. The Sugar Impact Diet is her latest. It's an awesome book. I highly encourage everyone to read it. The Virgin Diet and The Virgin Diet Cookbook, also terrific sources. She's a frequent blogger at Huffington Post, MindBodyGreen, many other outlets, a guest on TV, radio, magazines. I'm just really happy and really thrilled to have you with us here today. Thank you for joining us.

JJ: My pleasure! And we look better than we did those many, many years ago anyway. So, there! [Laughs]

Dr. Masley: Yeah, this has been a great collaborative effort and really trying to change the world. I'm pleased with what you've accomplished. You've helped so many people make a difference in

their lives, lose weight, get it off, and keep it off for good. So that's quite an accomplishment. I'm really thankful to have your presence out there.

JJ: Well, I'm back at you with your killer 30-Day Heart TuneUp book and what you've done with public television, my gosh! You are it!

Dr. Masley: So let's talk about what's the number one cause in your mind for heart disease today?

JJ: The number one cause, the single biggest thing for heart disease and cancer and diabetes and bad mood, 70 different health conditions, obesity on down, is definitely sugar. I may not have said that a couple years ago. But the number one question I got asked on The Virgin Diet was about sugar.

And when I did my deep dive into really helping people get control of it and stop being so confused by it and thinking that honey, because it started from a bee, was somehow this miracle food, I realized how much this is devastating our health. But worse yet, people don't even realize how much they're eating. They actually think they're not eating much at all. And they're just eating 152 pounds of sugar a year is the average.

Dr. Masley: I couldn't agree more. Sugar I look at as the number one cause of heart disease. That was one of the themes, as you know

in the 30-Day Heart TuneUp book. So I'm really delighted to hear that from you.

So where do sugars hide? They are hidden out there. It's not just table sugar, which neither of us encourage. But they're hidden. Help us understand. Where are these things hiding at?

JJ: Well, we are eating less table sugar than ever. I can't even think of it, except when you're in a restaurant where they have little packets, at whose house do you ever go to where they have a little thing of table sugar? You can't find sugar cubes anywhere. So it's really not the table sugar that's the issue.

The real issues actually are a lot of these things that are posing as health foods. Where the problem started was when fat got named the villain of the heart. As we know, that's not the case at all. But when fat got punished, we pulled the fat out of food and started adding the sugar in and then calling the things health foods.

So if you look at a lot of the fat-free dressings and fat-free yogurt and fat-free sauces and diet foods and no fat dairy products and these cereals and crackers, you flip them over.

And the challenge is we don't really know how to look at this because they'll say 5g of sugar, 10g of sugar. Or it'll say, "No added sugar." And it has fruit juice concentrate

added. But you just think you're okay because 5g doesn't sound like much. But the challenge is it all adds up.

And for so many of these foods... Let's take the fat-free salad dressing that's got a teaspoon of sugar per tablespoon of dressing. You think, "Oh, it's fat-free. And I'm just having a salad." And all of a sudden you turned to your salad into a sundae.

Dr. Masley: But there's 20 things in a day that we might have that have only 5 to 10g, one or 2 teaspoons of sugar, that is the problem. It's in everything.

JJ: You turn around. And they say the average person is eating 152 pounds of sugar a year. And people are listening, going, "Well, that's not me." And then I say, "Well, take the Sneaky Sugar Inventory." It's part of my book. And start to look at that marinara sauce. Look at that cereal. Look at that green drink that actually has five servings of fruits in it. It has more sugar than a soda.

Start to look at all of these things. Or maybe you're just thinking that fruit is free food. And you're having five servings of fruit a day. It adds up. And your body doesn't care. Because we've been looking at sugar all wrong. It's not going to care if it was honey or agave or brown raw sugar. It all says, "Oh, it's sugar!"

Dr. Masley: Now, what is the impact? What's the impact of all that sugar out there today, this high sugar impact?

JJ: Well, and that's what I wanted to create a new name for it. Because, again, we've been looking at sugar all wrong. I know we're going to talk about a new way to look at this. But the first thing I'd like to do if I want people to understand that food is information. And you need to listen to your body. Your body is not a

bank account. It's not a calories thing. It's a chemistry lab. And the sugar does crazy stuff to your body.

They're very basic things. And they're unfortunately the things we're taught to look at as a normal, that creeping waistline belly budge. "Oh, well. You're just getting older." Or the joint pain, the headaches, the fatigue, the moodiness, that afternoon crash. "Oh, that's just normal." Having to eat every 2 to 3 hours, feeling like you're hungry all the time, craving carbs, poor immune function.

All these things that you going to the grocery store or the drugstore and there's loads of medications for them, it's like these are not normal. Your body is trying to tell you to knock it off.

Dr. Masley: All right. So we try to use tools to measure this. And I think one of the more popular ones out in recent years has been the glycemic index.

JJ: Yeah, which is just dumb.

Dr. Masley: So tell us, what is wrong with the glycemic index? It is a tool. And it's a start. But how do we make it better? What's wrong with it? Why can't we just rely on that alone?

JJ: I actually think it's what's really caused the problem. On the good side, it started us looking at this. But then we started to look at it all wrong because the glycemic index, what it did was take a 50g dose of a food in isolation and measure the blood sugar response to it.

We don't eat that way first off. Who says, "I'm just going to have 50g of carrots."

Dr. Masley: Yeah, that's 9 carrots. I couldn't eat that many carrots if I had to.

JJ: No! So no one is doing that. And people just aren't going to sit down and say, "Tonight for dinner, I'm having carrots. That's what I'm having." So you've got to look at how we eat, the right portions and what else we're eating with it.

But the biggest problem with the glycemic index is that it only looked at a certain amount of food—not really relative to how much you'd actually eat—raised your blood sugar. It made a specific sugar—the worst sugar of all, fructose—look like it's good for you because fructose doesn't raise blood sugar because it can't be metabolized by any other organ but the liver. So it bypasses raising blood sugar and goes straight to the liver.

Now, because it bypasses raising blood sugar, at first we thought, "Well, this is great. It'll be great for diabetics."

Dr. Masley: Not so, right?

JJ: Not so much! It doesn't raise blood sugar. So it doesn't trigger insulin. But it doesn't trigger insulin, leptin, ghrelin. Your body doesn't know you ate. Now you're perturbing your whole insulin metabolism. And it's going to the liver where, guess, it could get changed into glucose and stored as glycogen.

But the liver doesn't have much space. So if that little storage unit is full—and just assume it is because you shouldn't be able to handle much fructose—it's getting stored as fat. That's why we have kids with fatty liver.

Dr. Masley: Liver fat. Basically we're making pate out of our livers.

JJ: And it's going everywhere else, too. It's raising triglycerides. It's creating hypertension. And the challenge is with fructose is it got this hall pass—fruit juice

concentrate and agave—as like this healthy option.

Dr. Masley: Thank you for mentioning agave because it's almost all fructose. So you can't sense it. It's not going to make you satisfied. You're not going to feel full in the normal hormonal mechanisms. So you just end up making liver fat and getting liver damage and triglycerides out of it. So it's really not a health food.

JJ: It's worse than that because the more fructose you eat, the better your body gets at transporting it. It elevates this thing called GLUT5 transport. So you get better and better and better at making more and more fat. And the more sweet you eat—because fructose is super sweet. That's why we like it. And that's why the food manufacturers like it—the more sweet you want.

So you dull your taste buds. You no longer can appreciate the sweetness of a blueberry. So now you just need super sweet food. And it's the most aging sugar. So it's aging you. And it's creating insulin resistance. It's the worst thing for diabetes and prediabetes. In just a couple more years, it's just going to be everybody if we don't get this word out.

Dr. Masley: High triglycerides, metabolic syndrome, prediabetes, all those things happen with it. How about snacking? Give us your take on snacking and how that fits into the whole Sugar Impact Diet.

JJ: This has always been a big controversy. I look at it. And if you're eating a lot of fructose and you're eating a high glycemic load... And the worst combo is to eat fructose and then foods that also raise your blood sugar. Talk about a one-two punch. We can offset that with fiber and nutrient density. That's what we really want to do.

But if you are eating correctly... And I always like people to add before they take away. If you're eating clean, lean protein, healthy fats and lots of fibrous foods, you should have a good steady release of blood sugar. Blood sugar should never spike and dump. You shouldn't have big, high insulin levels. And you shouldn't need to eat every 2 to 3 hours.

When people have to snack... You hear the recommendation to snack so that you keep your blood sugar levels up or level. But, in reality, if you're eating every 2 to 3 hours, you're probably not having salmon.

Dr. Masley: Not enough protein, not enough fiber.

JJ: Not enough protein, not enough fiber. And you're bumping up your blood sugar. And every time you bump up your blood sugar, your body is going to bump up your insulin. But blood sugar comes down quickly when insulin tells it to. But insulin doesn't.

So what ends up happening is insulin stays high. It locks the doors to the fat cells. You can't use stored fat for fuel. So all of a sudden you get stuck where you have to eat every 2 to 3 hours or your energy crashes, which means—and this is a really important distinction—if you have to eat every 2 to 3 hours, if your energy crashes, you get headaches, you're craving, if you cannot burn the fat off your waist... Which is why it's so critical to the waist and hip measurements along with your weight. You never want to be losing weight and not losing your waist.

If you've got that going on, you are a sugar burner. And you don't want to be a sugar burner. You want to be a fat burner. You want to use stored fat for fuel. So you want to be able to go 4 to 6 hours before you need to be able to eat again. And you

can't do that if you're eating a little carb hit every 2 to 3 hours.

Dr. Masley: There you go. Yes. I think the take-home various if you're snacking, you may never get a chance to burn off the fat, especially that belly fat. So we need to be able to get through a 4-, 6-, 8-hour period of time without eating every day to help normalize our appetite and metabolism, I think think is your point.

JJ: Yes. I think that's one of the biggest controversial areas now is when should we eat. Because now we've got the intermittent fasters. And there's still the people out there saying, "Eat every two hours. And have a snack right before bed." I'm like, "No! No."

Dr. Masley: Yeah, right before bed so you store fat effectively and gain weight.

JJ: Yikes!

Dr. Masley: Now, what about artificial sweeteners? Isn't that what everyone is saying? I don't mean to torture you because neither of us really like artificial sweeteners. But let's let the listeners hear your take on this. I think this is really important.

JJ: Oh, it goes way past I don't like them. I loathe them. This is a science experiment that went so bad. And where it makes me the most crazy is when you see it in children's foods. It's like, "Ugh!"

So what is wrong with artificial sweeteners? Well, we created them first for diabetics because we wanted diabetics to be able to still eat sweet. Why?

Dr. Masley: Why? Bad idea.

JJ: —without having to raise their blood sugar. But it's like you start to notice why is it that the people

who use artificial sweeteners seem to still struggle with their weight? So what the studies have shown is that they can still raise blood sugar. They can still raise insulin. But probably—and I think this was the most landmark study—was when they looked at the gut microbiome, the bacteria in your gut, and they saw what they really do...

And they do it in seven days. Seven days! They took people who'd never had artificial sweeteners. And I think, "Who volunteered for this study?" Because after seven days of these people having artificial sweeteners changed their gut flora, their gut microbiome so it became intolerant to glucose. So now they're having big blood sugar response to carbohydrates, which means a bigger insulin response, which is why we're seeing that whole thing with bigger waist measurement of people do artificial sodas.

They did one study where they showed that someone who had a diet soda a day actually had a higher waist circumference than someone who actually had a regular soda every day. That is insanity. But we've seen the links to diabetes, hypertension, food cravings, calorie dysregulation.

A big one is when you eat sweet with no calories, your body is expecting calories with it. So now they did a study with rats where they gave them regular sugar water, allowed them to eat, they ate what they needed. And then they gave them artificially sweetened water, allowed them to eat, they ate what they needed. Then they went back to sugar water and overate.

They don't accomplish anything they were set out to do. All they do is cause you to overeat. They cause you to become diabetic or glucose intolerant and want more sweet.

Dr. Masley: It does feed that addiction. We're going to come back to addiction a little bit because I think it's one of your important teaching points. But, yes, if we're adding these artificial sweeteners, one, we're not learning to live without this sugar addiction.

But, two, I'm hearing your point is we're always hungry. We didn't get a real calorie. We got fake calorie. And the brain isn't stupid. It's going to get even, change our leptin receptor activity, something like that. And we're going to eat all the calories back, anyway. So you're not really saving anything in the bottom line.

JJ: You didn't save anything. And besides, we know it's more than just calories. It's what those calories tell the body to do. So if these calories are telling the body to raise insulin, you just got in deep trouble.

Also, they're neuroexcitatory. So the other part of this is that they're exciting the brain and lowering serotonin. Now you're wanting even more sweet. So they're not solving. They're creating an even bigger problem of what they set out to solve.

Dr. Masley: Okay, agreed. How much sugar could people eat? What do you think is a reasonable amount? I'm sure some people must ask you that, right?

JJ: The top questions I get asked are how to deal with cravings because people have had sweet tooth their entire life.

Dr. Masley: Right. We're going to come to that shortly.

JJ: We start kids with that early. And then, "How much should I eat?" And when I developed the program, there's no set answer to that. And what you really have to do is reset your taste buds and reset your biochemistry and get yourself back

in control and connect the dots so that you understand, "I know exactly what I can eat and what I can't and how it makes me feel."

Like I'd never sit down and eat a piece of cake because I've never really liked cake. It would have been cheesecake back then. But it would make me feel good. And I know exactly how it makes me feel. And I don't want to feel that way.

So I know how much fruit I can have and still feel good. I know where I fall in carbs, what types of carbs work best for me. I do better with wild rice or quinoa or legumes than, say, a pasta. So what I do with this, this allows me to connect the dots and really learn what foods I can use and which foods you shouldn't be touching. But you have to go through the process to do that.

Dr. Masley: Okay, so how about when people say, "natural?" We've already said agave, please forget it. But how about honey and molasses and these other sweeteners that people say to me, "But they're natural!" How do you respond to that?

JJ: Well, arsenic is natural. You can take that to the extreme. So I divided foods based on fructose and how much something raise your blood sugar when you eat a normal amount of it and nutrient density and fiber. I divided food is high-, medium-, and low-sugar impact. Low-sugar impact, go, the best foods to choose from. Medium-sugar impact, proceed with caution. And high sugar impact.

So in terms of sweeteners, if you were eating raw, local organic honey using it homeopathic leap to help with an allergy, maybe a half of a teaspoon... But that's not what people are doing. They're taking the [inaudible] at Starbucks and they're going, "Ergh! It's honey!" You see it all the time.

The challenge with all these things—and I hear the other argument with maple syrup and molasses that they want to get in some of the nutrients in there, and the same with honey—and I'm thinking there's a lot better places to be getting your nutrients than from getting the sugar that depletes nutrients. It's one of the most depleting things that you can eat and also totally messes with your immune system.

So I don't believe in doing any added sugars at all. If you need to use a sweetener, I'm big on monk fruit or Stevia or xylitol or erythritol. Those are it. But really we've got to get back in touch with what natural sweetness tastes like.

Dr. Masley: What real food tastes like, right?

JJ: What's a raspberry taste like? What's blueberry taste like? What's cinnamon? What's vanilla? What's a sweet potato? There's plenty of stuff that's already sweet out there. Let's get back to that. But let's also get into savory and spicy and sour.

Dr. Masley: So what do you say to someone that goes, "I've had a sweet tooth my whole life."

JJ: You need to come here now. When I did the pilot test, that was my goal. I didn't set out to do a weight loss thing. That's a good, nice side effect. We had 700 people. The average person lost 10 pounds and 2 inches off their waist. That wasn't my goal. I knew that it was help reduce their risk of cancer and heart disease and diabetes. I knew it would help balance their blood sugar. You know that.

But I knew that I had to get rid of their sweet tooth forever and help them get back control over sugar or none of this mattered because who cares what you can do for two weeks?

Dr. Masley: Or even a month. It's not going to be enough.

JJ: It doesn't matter at all. We have to make it so that sweet food just tastes gross. We have to reset your sweet sensitivity. So when I looked at all of this and I looked at all the programs out there, and I realized there were so many challenges. First of all, there were programs that just cut the sugar, but you were still having things like wheat bread, that can raise blood sugar more than 6 teaspoons of sugar.

Or there were letting you have as much fruit as you want. There wasn't some that I really looked at that went okay, "All carbohydrates turn to sugar in your body. We want your body making sugar slowly from the foods you eat, nothing that's going to spike it. And balance it out with protein and fat and fiber." So how do we do all of that?

So the first week or two, depending on someone's health, I have then taper. And I think that's so critical because what I looked at with most of these programs are like, "Okay, cut it out!" And I'm thinking, "That's not going to work."

And how do you gradually lower the sugar down and start putting in things like savory and spicy and making sure they're getting enough protein so that they're making good brain chemicals to help stop the sugar cravings and working on things like sleep and exercise?

So the first couple weeks are tapering. And the other thing that is really important there is when you're working on someone's sweet tooth, sour actually can take your sweet tooth away. How cool is that?

Dr. Masley: Well, it's one of those five main taste buds.

JJ: So what I have people do who have had a sweet tooth their whole life is, again, I always add before I take away. So I want to crowd out with getting enough protein, fat, and fiber. And then I have them do what I called lemonade. So 4 tablespoons of lemon juice in water and a little glutamine and chia seeds half an hour before they eat. So that helps them not want the sweet.

But then once they go through that, we go through a 2-week reset where we go all low and I take fructose out altogether. And that was the crazy thing because what I set out to do, I took 700 sugar addicts through this. I took the people who had been on The Virgin Diet and couldn't get rid of their sugar issues. I took people who this has been their thing since forever.

And the biggest thing that I heard was, "Sweet food just tastes gross" because you never take a break. And you never get back to eating foods that, again, are spicy, savory [inaudible] salt. And all of a sudden they were tasting these things going, "Oh, this is disgusting. It's disgusting."

Even me, I didn't realize how much those dressings that the restaurants are loaded with sugar. They'll brush it. They'll glaze the salmon. And once you do this and you taste any of that, it just tastes disgusting.

Dr. Masley: Well, it's like if you haven't had a soda in years and you're not eating sugar, you try a soda, and it's like, "Whoa! Way too sweet!"

JJ: Yeah, you drink an apple juice and you're like, "Eck!"

Dr. Masley: But if you're having a six-pack of a soda a day, you're addicted. You don't notice it at all.

JJ: You would never take a complete alcoholic or drug addict and go, "All

rightly! Quit. See you later. Go out in the real world.”

Dr. Masley: Now, I think you’ve hinted at this. So when someone cuts out sugar, though, if they don’t do it properly, they risk their energy dropping, right? So let’s talk about how do you do with the right way so you can get off the sugar and your energy goes up and you feel fantastic?

JJ: And that’s really the big thing because if you try to just cut it out... And I had one woman who was in the program. She goes, “I tried this before. And three days into it, I was racing to the vending machine for a Coke because they couldn’t make it.”

Because she, again, right now, she’s eating every 2 to 3 hours. And you’re probably getting a lot more sugar than you realize. Remember, all carbs except fiber are turning into sugar. It’s just how quickly your body is doing that. You’re probably fueling on sugar.

And if you are doing that and then you just drop that dramatically and your body hasn’t had time to make that shift into being a fat burner, you’re going to crash. You’re going to crash. You’re going to get weak, headachy, cranky. And you’re going to go racing for a quick pick me up. So you cannot do that. And that’s why tapering down is so critical.

Dr. Masley: So number one, taper. You don’t just cut it out all at once. You’re tapering back. And what else can you do to help become a fat burner?

JJ: So we go from high sugar impact to medium sugar impact for one to two weeks, following the Sugar Impact plate. So getting in some clean, lean protein, healthy fats, and then slow, low carbs, lots of vegetables. And then other things that can help there is getting a good night’s sleep. Boy, is that huge! And

managing your stress and doing some burst training exercise.

Dr. Masley: Well, the stress is important because if your cortisol is high, that’s going to mess up all our sugar metabolism. So sleep and stress management are important parts of this whole process. It’s not just food. There are other components that are essential.

JJ: Right. So we have all of those strategies in place, too. I always like people to focus on the big thing. And the big thing is taking that taper and really starting to realize, “Okay, if I was eating a white potato, I’m going to have a sweet potato. If I was eating wheat pasta, I’m going to have quinoa pasta.” So how do we start to taper down that sugar impact?

And, more importantly, I like to add before we take away because so often we are eating, we’re not getting enough protein. And we’re not getting enough healthy fat.

Dr. Masley: So I think you’ve done this already to some degree. But just to do it in your complete version, walk me through The Sugar Impact Diet.

JJ: All right. So it’s a 4T framework. I love frameworks. And what I have people do first—because what you measure you can improve—and what you measure and record you improve exponentially. So I always start with checking [inaudible]. You do the Sugar Impact Quiz. That’s really looking at what does eating a higher sugar impact diet due to you?

Again we talked about energy and belly fat and cravings. So you run to the Sugar Impact Quiz. And you rate yourself because where you fall on those scales is going to then depend on whether you do two weeks of taper or one. And I also have found that people don’t realize how crappy they feel at the

beginning. A lot of these things are things we think are normal, like low energy or headaches or moodiness. So you do that. You take the Sneaky Sugar Inventory.

And these are things that people don’t really realize. Again, like we talked about earlier, it all adds up. So that marinara sauce with added sugar in it or the fat free yogurt... You know, most of these fat-free yogurts have more sugar than the same amount of ice cream. It’s craziness.

So all these places that sugar is hiding. And you take the Sneaky Sugar Inventory. And then you do your weight, and waist and hip measurements. So you go through that. That’s the first step. And then you go into the first cycle, which is a taper cycle. And during that cycle, I have you going from high sugar impact foods to medium, medium and low. But we’re not making this dramatic drop.

Dr. Masley: You’re gradually weaning off.

JJ: We’re eating by The Sugar Impact plate. Again, healthy fats and protein and low impact carbs. Those are things like quinoa and beans and squash and loads of non-starchy veggies. And you’re starting to stretch your meal time. So if you were eating every 2 to 3 hours, let’s go every 3 to 4 hours. You’re starting to increase your water intake. You’ve seen me drinking throughout this.

Dr. Masley: There’s water in my coffee cup here. But it is water.

JJ: So lots of water, using that lemonade that I talked about with the lemon juice and chia seeds included if you need it.

Dr. Masley: That little bit of sour actually does help.

JJ: It totally helps. And then starting the day with a shake because so many people start the day with dessert. And once you start the day with dessert—

Dr. Masley: Cereal, milk, orange juice, toast.

JJ: Yeah, a banana. I'll never forget I was on vacation. It took my kids and my mom to Kauai. My mom told me she wanted to have a light breakfast. So she was just going to have to use, toast, jam, and fruit because she was going to lose a little weight while you were there. I'm like, "Have you read my book?" "Skimmed it." But, anyway. There's no prophet in their hometown, right?

So you look at that. And thinking to myself, "You might as well have just had two candy bars because you had more sugar than you would have had in the candy bars, mom." People just don't realize that the cereal with the nonfat milk that's got 11g of sugar in it with the juice... A glass of apple juice has got more fructose than a soda does. So they just don't realize what they're doing.

And once you start that blood sugar roller coaster going up and down first thing in the morning, you can't get off of it. So breakfast really is critical. And the studies are clear. People who start the day with a substantial breakfast rich in protein eat less throughout the day.

Dr. Masley: And protein ramps your metabolism and makes you feel satisfied. And it's so easy. Two minutes and I can make my heart shake. Boom, I'm done. I'm out the door.

JJ: Just throw it all in there and hit play. You put in your protein powder. You put in some fiber. I throw in avocado. That's fiber and great fat, some coconut milk and almond milk and you are done. This

is easy. Maybe some greens, maybe some berries. Simple.

Dr. Masley: There you go. You just hit my breakfast at least five days a week.

JJ: Yeah, I have a shake every single day. I travel with a Nutribullet blender. I travel with shake mix. I travel with coconut or almond milk or have it shipped to the hotel.

Dr. Masley: So let's talk about the benefits of this. I know that we can prevent heart disease by doing this. What benefits do you see and how quickly do you see them?

JJ: Oh, okay. I think I stuck at taper, though. So people go through the taper part. And I have them take the quiz at the end of taper to make sure they're ready to move into the transition cycle. And the transition cycle...

By the way, their journaling the whole time, not just with they're eating, but also their mood, their energy level, their cravings because this is one of those crazy things that journaling, they did a study on people and diets. And the journaling was the number one determinant of whether someone was going to be successful. In fact, people journals were twice as successful.

Dr. Masley: It works. It works. What can we say?

JJ: It works. So you journal. There's just certain things. You take tests. You write it down. You journal. And I think it's really important to have some kind of a support group or an accountability partner. So those are things that I built it.

Dr. Masley: Okay, love that.

JJ: Then you move into transition. This is really that reset phase or the sugar detox phase where you go

down to low sugar packed. So we've gone from medium sugar impact to low. So if you were having a sweet potato, now you're having pumpkin. If you were having quinoa pasta, now you having quinoa. Or brown rice goes to wild rice. So we're just doing simple shifts.

Again, I've always done swaps so you don't go, "Oh, I can't believe I can't have white rice and I have to have wild rice!" So simple little shifts. You're still eating by the plate. You're doing or shake. But what's critical during this time as I actually take fruit out completely. I take fructose down to zero or as close to zero as possible because I want you to get that transporting fructose. I want you to get back in touch with your appetite. And I went to reclaim your sweet sensitivity.

So during this time, we've tapered off of all the sweeteners. Even if you're using something allowable likes stevia or xylitol, it still keeps you wanting sweet. So we take it down. We go savory, spicy, sour. And at the end of those two weeks, I have people go into this transform cycle. And that's where you really figure out, "How much can I eat?"

And it's a different thing because it's not so much, "How much do I eat?" It's really, "How much do I want to eat? How do I feel now?" They take the quiz again. They take weights and measurements. And now you go and you start incorporating some medium sugar impact foods back in each day, like some fruit in your shake or a sweet potato.

And then you do a trial of one high sugar impact food, whatever you want. It could be French fries. It could be ice cream, whatever it is that you want. And you see how you feel. And the biggest thing I hear from people is, "It just tastes gross. My energy went down."

I had one gal who could never control her blood sugar. She was on Glucophage, was still 140. She goes through the reset. It comes down to 90 for the first time ever. Totally never been able to do that.

Dr. Masley: Normal.

JJ: Yeah, normal. I'd like it even lower. But at least it was there. She goes back and starts trying these things. And it bumps straight back up with even medium, 117. Then back with one of those high, it's 140. It's like, "Okay, well, what you need to know? Now you have your new baseline. You don't want to be there anymore."

So it's a very empowering shift because it's not like, "I think I'll cheat." Because you know what it's going to do. These cheat meals people do are a gateway to a cheat day, a cheat week. And then you're done.

Dr. Masley: The goal is to reset all those hormones so you feel terrific. I think that's the thing that most people don't realize. It's not just about your blood sugar and your cholesterol and blood pressure look good. You feel awesome when you do this.

JJ: Yes. Your energy is amazing. And I love that statement, "The way you do one thing is the way you do everything." But in your body, the way one thing hits, it's all cascade of, "Okay, so now we lowered our sugar impact. Now we controlled our blood sugar. Now we reduced our insulin. Now we've controlled our inflammation. Now your gut microbiome is healthier. Now your immune system is better. Now you can hear your leptin again." It's just like whoosh! You know? Everything has changed.

Dr. Masley: So how long does it take to really feel this? So what are the benefits you hear about when

people go through this? And how long does it take them to get those benefits.

JJ: The biggest thing I'm harping on people about us make sure they do the taper week and not to think of the taper week as anything more than just getting set up. It's really those two reset weeks. And go through those two recent weeks.

The number one thing I hear is that sweet food just tastes gross, that they have gotten control back over sugar. And that is the key thing, when you have that control back. We can't rely on willpower. We can't be white knuckling. It's just ridiculous. It's never going to work. But if all of a sudden you know that it doesn't make you feel good and it just looks and tastes gross now, you are going to order different at a restaurant.

Dr. Masley: And that makes it easy.

JJ: Yeah, it makes it easy. It's no longer a war against yourself. So that's the number one thing. The average person loses 10 pounds in two weeks and 2 inches of their waist. But, again, then they're in control where that can just continue to work for them. So that's great. Blood sugar stabilizes. Appetite gets back under control. They're not as sick as much. Inflammation goes away. Gas and bloating is gone. It's just amazing stuff that happens.

Dr. Masley: I would say from a heart perspective they start shrinking their plaque. Their arteries literally start to dissolve plaque. Their blood flow is better. It just transforms the whole life.

JJ: Yes, it does. And it's so simple. Once I did this, Stephen, it was amazing because I've been kind of the gluten-free, dairy-free, soy-free, blah, blah, blah girl. And then I go through all this.

And it is so clear to me that the single most impactful thing we can do in the world to change the health of the world and therefore change the economy of the world because our biggest blight on our economy is not being productive is disease, is sickness, that the number one thing we could do is lower sugar impact.

If we did that, we could pretty much change in nearly every big bad issue. We might not get rid of terrorism. But maybe they'd be nicer. I don't know. But a lot of stuff would get better fast if we can just lower sugar impact.

But we've got big uphill battle because if you look at it, we've got manufacturers who are allowed to lie on their labels. And it's a big challenge. And we've got confusion. And I think this confusion of lower sugar to 10% of your calories, how much is that? Or don't eat more than 5 teaspoons of added sugar. Well, what is that?

Dr. Masley: What is that? But I think at least in *The Sugar Impact*, you've given people the tools to look through where is sugar hidden? What are the names for it? I you find it? How do you get through this maze so it's easy? And I want to commend you. You've made it easy to do this when someone reads your book. So thank you for that.

JJ: You're welcome. I mean, who wants to do math?! It's ridiculous. It's like it's not going to work. That's why just created the scales. And all the foods are there. So just pick those.

Dr. Masley: So do you want to share a success story of someone you can think of that this has made a huge difference for?

JJ: The biggest thing that I like to talk about, kind of my through line in all of this is that if you're controlled by sugar or anything else—it's

impacting your health—you can't really do the things you're really put here to do. It's holding you back. So when I take people through the program, one of the things I have to do is have them write out their goals.

And let's write out the things like, "I want to lower my blood sugar to this number. I want to get my cholesterol to this number. I want to have my waist line be this." Okay, great. Right those very specific goals. But then I want you to think a bigger to the crazy stretch goal that you're going, "Oh, my! The big one!" So I had this one gal. And she wrote down that she wanted to be a health coach. That was her big goal.

Now, a little story about this woman. This woman has had an issue with sugar her entire life. She has never been able to get off of it. And she has never been able to lose weight. She's been morbidly obese, over 100 pounds overweight since her 30s. She just recently retired. She decided in retirement she was going to quilt and see friends because she couldn't do anything. She was getting to the point where she wasn't even that mobile anymore.

And she went on the program. And for the first time ever, she starts to lose weight. But more importantly, she lost her sweet tooth. So she thinks to herself, "I can go to the gym." So she goes to the local women's gym. She's in there. She's starting to work out. She's continued to lose weight working out because the sweet tooth thing is no longer her issue. And she tells the owner how her big dream was to be a health coach. And the owner hires her on the spot.

And part of working there, she had to go through this whole health and fitness certification. So she goes through it. So now she's got 300 or 400 women that she is now

coaching on how to do this. And what's so crazy about this... She said, "I thought it was crazy making this big stretch goal." I always think if you make this goal, if you write out a goal, you're 40% more likely to hit it. Now, if you share it, you're 80 percent more likely to hit it. And she, Joan, hit her goal and started a new career as a health coach at 70 years old.

Dr. Masley: Nice!

JJ: And that one, every time I say it—

Dr. Masley: She felt so much better.

JJ: Because she stopped being held back. Sugar is a drug. It is our number one recreational drug of choice. It is all around us. It's hiding in places you'd never expect, but at the health foods. You're probably addicted. It's not your fault. But now that you know better, you can actually do better.

And if you've got low energy, if you're self-conscious about your weight, if your joints hurt, if you can't think straight, if you have headaches, any of that stuff, this can turn it around. That's not normal. That's not just aging, right? That's not genetics. That's sugar.

Dr. Masley: And now you have the tools to impact that and change it.

JJ: Yes. And it's so much easier than you realize. And honestly it's two weeks. Come on. Who can't do something for two weeks?

Dr. Masley: Final take-home messages? Anything else you'd like to share here with our listeners today?

JJ: Well, a final take-home message is I want you to really rethink. If you are struggling with gas and bloating, with joint pain, with headaches, with brain fog, fatigue, you can't lose weight, especially around

your waist, you've got cravings, big appetite, if you're doing that and if you really feel like you've been trying to do everything and it's just not working, my guess is that sugar is sneaking into your diet in places you'd never expect.

And you've been trying to do this, trying to do your little snacks in all this. But you've really been following the wrong set of rules. You only to yourself to take a look and see where sugar is sneaking in and go through this because literally it can take you into a totally different place in just two weeks.

And we only get one shot at this. And I'm sure we've been put here for much bigger reasons than most of us have been able to do because we're just too tired to do it. So this is the shot. Lower your sugar impact. And then once you do that and you have that amazing result, my biggest thing is pass it on. Pay it forward.

Dr. Masley: All right. So I've really enjoyed getting to talk with you today. I'm sure our listeners have gotten a great deal out of this. If they wanted to get more—I'm sure they do—how can they get more information from JJ Virgin?

JJ: Well, I'm talking to you from my Skype studio. I actually have a whole studio set up because we record so much. I have a really cool podcast on iTunes if you search JJ Virgin Lifestyle Show. We put a new one out every Wednesday. And we query viewers. So we had 7,000 questions. So I've got a lot of content.

If you go to JJVirgin.com and jump in, we sent out an e-zine every other week and a ton of great content all the time. And I do based on what people are asking me. And we're always doing something fun, depending on what book is out or what TV show or whatever.

So I have a whole team. And we work really hard to get a lot of free information out there because I never want there to be an excuse as to what you can't take action. So I've got tons of resources, whether it's Sugar Impact Diet or Virgin Diet or fitness or whatever. We've got it.

Dr. Masley: Well, thank you so much for joining us today. That was awesome. I really appreciate having you on!

JJ: Aww, thank you. I appreciate you, too!

Dr. Masley: So this is Dr. Steven Masley wrapping up with the Healthy Heart Summit today. Now, if you would like to share this talk with a friend or there's other speakers out there that you'd love to here, don't hesitate. Click on that banner below. This is your chance to tune in with world-renowned experts and how to prevent and reverse heart disease. Thank you for joining us!



The Sugar-Cancer Connection

Sherry Strong with Ty Bollinger

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Sherry: Hi, I'm Sherry Strong, and welcome to the Sweet Freedom Summit, which is dedicated to ending sugar addiction for good. And today with me, I have Ty Bollinger. So Ty is a happily married husband, the father of four wonderful children, devoted children, and he's a bestselling author, medical researcher, talk radio show host, health freedom advocate, he's a former bodybuilder, and also a certified public accountant. So that's quite an all-encompassing picture.

Now, more specifically, the reason Ty does what he does is after losing several family members to cancer, including his mother and father, he refused to accept the notion that chemotherapy, radiation, and surgery were the most effective treatments available for cancer patients. He began his quest to learn all he possibly could about alternative cancer treatments and the medical industry.

And he's now made it his life's mission to share the most remarkable discovery he made on his quest, that the vast majority of all diseases, including cancer, can be easily preventing, and even cured without drugs or surgery. He frequently speaks to health groups at seminars, expos, conferences, churches, and is a regular guest on multiple radio shows, and writes for numerous magazines and websites.

So speaking from personal experience and extensive research, Ty has touched the hearts and changed the lives of thousands around the world. I would actually say that's probably getting close to millions, if I'm not wrong?

Ty: Yeah, it's definitely in the millions now.

Sherry: Yeah. Yeah. So welcome, and thank you for joining us on the Sweet Freedom Summit. I'm really excited to have a chat with you today.

Ty: Yeah, thanks, Sherry, good to be on with you, too. I'm looking forward to the conversation.

Sherry: Great! So I've followed your work for a while now. I'm a subscriber to the Truth About Cancer, and my mother is. And in the last year, I've lost four people, two of them in their early fifties. One was a bridesmaid at my wedding. Another was a dear, dear friend. And the second one that I mentioned went through all the traditional routes. I lost my aunt last year, almost a year ago. And again, she never thought she'd do the traditional routes, and then ended up doing it. So this is a subject that I don't think there's anyone who isn't touched by it.

Ty: Yeah. I'm sorry for your losses, too, Sherry. And you're right, everybody's been touched by it. And it's bizarre though, you have people, you mentioned, was it your aunt that said she would never do the traditional treatments? But

then, she did. And I hear that a lot. And I think the reason that that happens is that you get diagnosed. And then, you're overcome with fear. And if you don't have an alternative, then your only other option is do nothing. And so many people will go with the conventional treatments because that's really all they know. And I think that's why it's so important to begin to learn about these things ahead of time and be preventative, instead of reactive.

Sherry: Absolutely. I think, too, that there's a lot of pressure. There's not just pressure when you're diagnosed from the medical field, but so much of family move into fear mode, and can really influence people to do something that their own intuition is saying, "No!" Right?

Ty: Yeah.

Sherry: Yeah.

Ty: Yeah, that's true. And fear does overcome. Fear does overcome us. And a lot of times, I believe that fear plays a part in the diagnosis and that stress plays a part in the diagnosis. So those are all things that may be a little esoteric, but it's all part of the equation. And really, when we talk about physicians scaring patients into treatments, physicians aren't necessarily bad people. I don't ever try to lead people to believe that. Physicians just aren't educated either. And so the physicians, a lot times, when it comes to treating cancer, they're telling the patient the only thing they know how to do. That's the only way they know how to treat.

And so I don't believe that there's these sinister oncologists that are sitting around seeing how they can kill cancer patients. That's not what's going on. It's just oncologists are not educated. They're not educated well on how to treat cancer. And so I think oftentimes, the oncologist is afraid for the patient. And so they're afraid. The patient's afraid. They go into these treatments that don't work very well. And a lot of times, we don't have a very good outcome. And so that's why I think it's important to come from a position of knowledge and from a position of love, of belief, of a positive mental attitude, instead of being overcome with fear.

Sherry: Awesome! That's exactly what we're all about. So speaking of being educated and not being educated, and that position of fear, can you tell us more about your story and how you actually came to discover this alternative field in your experience with your mother and father?

Ty: Sure. Well, I'd never dreamed that I would be doing something like this when I got out of college. I graduated from graduate school at Baylor University in 1991, and I have a CPA degree. I've got a master's in taxation. And so I figured that for my career, I'd be working at a Big 6 accounting firm. It was Big 8 back then. Then, it became Big 6. Now, it's the Big 4. But we keep having all these mergers. But that's what I thought I would be doing.

But the reality is that when my father got sick—in July of 1996, he was diagnosed with cancer, and he died on July the 25th of '96—25 days later—that changed things. That changed things for me. And it changed my focus to where I could no longer go down the same path once this had happened. And once I began to question the whole medical paradigm, I didn't understand at that point, Sherry,

how a man that was healthy, apparently healthy...He was 52 years old when my father died. I just turned 49.

So I'm three years younger than dad was when he died. I didn't understand how a man that was that young could be, have no symptoms except for a stomach ache, go in the hospital, and then be dead in 25 days. To me, that just shook my whole world because I was a believer that the medical system was as good as it gets. And we could do anything and we can save anybody.

And the reality is, when it comes to trauma medicine, we're the best. The United States is the best. If Humpty Dumpty falls off the wall, the medical system can put Humpty Dumpty back together again. If you're in a car wreck, go to the emergency room, don't grab aloe vera. There's a time and a place for everything. And when it comes to trauma medicine and when it comes to emergency medicine, we are the best.

But what I began to learn, as I researched cancer treatments, is that we're really back in the dark ages in the United States when it comes to cancer treatments. We are not good at treating degenerative diseases. It's a symptom management approach, as opposed to a preventative approach or a curative approach.

And that was what got me interested in doing more research. I eventually published a book on cancer. And I've published over a dozen books now, produced several documentaries on cancer. And this is what I do full time now. But it was really a personal loss with my father, and then several other family members, and eventually my mother, they all died from cancer. And that was what got me interested in doing this, what I do today.

Sherry: Awesome! So I love that you're not demonizing the medical profession and that you know that they're coming from a place of wanting to help. But there's also things that doctors aren't telling us because they don't know. And so when it comes to sugar specifically, can you talk a little bit about sugar's connection and what doctors don't know versus what you've discovered?

Ty: Sure. Well, it's clear, Sherry, that most doctors, and not all doctors by any means, because I know a lot of doctors that are well aware of this fact, but many doctors don't know the fact that sugar feeds cancer cells. Cancer cells are what's called an obligate-glucose metabolizer. In other words, they love to feed on sugar. That's where they get their energy. Cancer cells are anaerobic, which means the way that they produce energy is through fermenting sugar or glucose.

And so in light of that fact, when you see an oncologist's office that has candies at the desk, when people go through chemotherapy, and then they walk out of the office, and they grab a handful of candy, it makes no sense because they've not only most likely done a number on their immune system with the chemotherapy right, the chemotherapy will definitely kill cancer cells. There's no doubt that chemo can kill cancer cells. It also does a whack job with your immune right. It really lowers your immunity. And we know now that sugar, a couple of tablespoons of sugar can lower your immune system function for up to six to eight hours.

So in light of that fact, it makes no sense that oncologists will tell a sick cancer patient that maybe even be wasting from what's called the cachexia cycle, where your body begins to digest itself, you're starving to death, it makes no sense that an oncologist would

tell that person, "Go eat whatever you want, eat sweets, ice cream, candies, whatever you can to put on the pounds," because what they've really done there is they've told that cancer patient to go eat the very thing that will fuel the cancer cells in their body and help the cancer to kill them quicker.

And so, it's clear to me that those oncologists don't know about the connection with sugar and cancer. And I think a lot of the reason is that many of the medical journals don't publish anything about it. The medical schools don't talk about that. They don't teach the sugar/cancer connection. As a matter of fact, many of them will go as far as to say that there is no connection. That that's just quackery. When the reality is, we go all the way back to the Nobel Prize in 1932 or '33, I think, it was Dr. Otto Warburg who first uncovered the cancer/sugar connection. He was specifically looking at anaerobic versus aerobic metabolism, and so forth.

But we've known a long time that cancer cells thrive in the presence of sugar. And one of the best ways to kill the cancer cells is to just eliminate their fuel. That makes sense. If you have an overgrowth of fungus, then what do you do? Well, you cut out things that contain sugar because fungal infections, fungus loves sugar. And it's very similar to cancer cells. So we know that if you have a fungal infection, one of the first things you should do is get rid of sugar. Well, cancer is the same way. One of the first things that you should do if you're diagnosed with the cancer is eliminate refined sugars in your diet. But we don't seem to get that in the medical profession, thus far.

Sherry: So can you talk a bit about...I know when I started studying nutrition 30 years ago, we were told that colors and flavor and aroma compounds in foods

were phytochemicals. They were non-nutrient. So they looked good, tasted good, smelled good, which means you eat a lot of things where you got vitamins and minerals. But if I had said at that time that they were the most powerful substances for protecting us against disease in the food world, I would have been considered a quack. So that whole politics around quackery, an alternative, it's almost like if I don't have proof in front of my face, it's quackery if you're talking about it.

Ty: Well, it's funny, Sherry, that the first use of the term quack in the United States was actually around 1913. And it was by the American Medical Association. And this was after the AMA had gone in hand-in-hand with the Rockefellers and the Carnegies in what was called the Flexner Report, in which they were evaluating medical school curriculum across the United States. What they determined was that medical schools were generally not pushing enough synthetic chemicals.

To boil it down to what the results of the Flexner Report was is that those medical schools that were practicing homeopathy or herbalism or pushing these bright colors in foods, this goes back from millennia actually, that those schools were not teaching sound medicine, that only the medical schools that were pushing petroleum-derived synthetics, which Rockefeller and Carnegie both had a big hand in, you look backwards and you can retrospectively see that there were ulterior motives in these things that happened because they were looking to monopolize the chemical industry, which later became Big Pharma, that was really the whole gist of the Flexner Report.

But in the end, the medical schools that received the lower marks with the Flexner Report, which was submitted to the Carnegie

Foundation and then the United States Congress—and the Flexner Report, still to this day the gatekeeper for what is approved and what's not approved with the American Medical Association, and with medical school curriculum in the United States, what they found is that the schools that were practicing natural medicine, they were the ones that were practicing quackery.

That was the first usage of the term quack in the United States was the AMA. They actually developed an internal department in 1913, which they called the Propaganda Department. And their purpose was to demonize naturalists and herbalists and chiropractors. And all the people that were pushing natural medicine at the time were demonized by the AMA as being quacks. That was the first time the term was actually used in the United States.

So we hear that today. And we hear, "Oh, you believe in natural medicine. You're some woo-woo doctor that pushes herbs and phytonutrients. You're a quack." Well, just remember, that was first brought into our vernacular by the AMA trying to demonize herbalists in an effort to have this one way for medical schools to teach in the United States. And as you see, 100 years later, after that Flexner Report of 1910, now it's 116, 17 years later, look at what medical school curriculum teach in the United States. And as a general rule, 90 plus percent of medical schools are very, very drug intensive, don't talk about nutrition, don't talk about herbs. It's just one way. And that was accomplished over 100 years ago.

Sherry: So talking about trends and what we've learned from back then to now, and bringing it back to sugar, the consumption of sugar and how it's increased from the 1700s, where we were having four

pounds to 2012—these are recent statistics I took from your website—the average is about 180 pounds, so for people like you who are having the 3 to 10 pounds a year, there's other people who are having 300 pounds—so it's crazy. Can you talk about the impact of the dosage and the sheer volume of sugar that we're having and the correlation between cancer rates?

Ty: Yeah, well, I firmly believe that the increase in sugar over the last century is a direct correlation with... It's not only a correlation. It's one of the causes of the increase in cancer. As you mentioned a couple hundred years ago is an average between four and six pounds per person of sugar. Back in the times when one of my favorite shows was Little House on the Prairie growing up, and if you remember in Little House on the Prairie, they'd go and they'd buy a little bag of sugar. And it was only for special occasions. It wasn't something they used every day. It was like once in a blue moon. Once a week maybe, they got something that had a little sugar in it. But as a general rule, they didn't eat it. And then, it slowly increased and slowly increased.

And as we became more wealthy, we had more disposal income, we buy more stuff that we don't really need, like sugar. And so now, it's been incorporated in the diet. And it's anywhere between 150 to 180 pounds of sugar that the average American eats each year. And as you mentioned, somebody's eating my sugar because I don't eat it and somebody's eating your sugar. So somebody's consuming two or three hundred pounds, which is, if you think about it, it's almost a pound a day of sugar. That's an incredible amount of useless, empty calories, number one.

So it's contributed to the obesity epidemic to start with. But also, we know that refined sugar

compromises the immune system. They've measured the immune response after consuming sugar. And we know that your immune system is compromised from anywhere from six to eight hours. And I've even read studies out to 12 hours, your immune system isn't functioning at full capacity after you eat sugar.

Now, in light of the fact that we know that cancer is a disease that results from a compromised immune system, does it make sense to eat something that we know is going to compromise the immune system? And also, in light of the fact that we know that cancer cells actually thrive on sugar, does it make sense to be feeding them something that will help them to grow?

So you've got this double whammy with sugar, this triple whammy. It's useless, it causes obesity, suppresses the immune system, and feeds cancer cells. It's like, is there really ever a good reason to eat sugar? For refined sugar, I can't think of any. If you want something that's sweet, use Stevia. I like the sweet taste. Most people like sweet taste. But we can sweeten with natural sweeteners. If you want something like Stevia, I use a lot of Stevia. If you want a natural sugar, you can have raw honey. Don't eat a lot of it, but at least, it's not refined. So there are alternatives.

And if you look, Sherry, at refined foods today, if you look at boxed, packaged foods, stuff that you would never even think would have sugar in it has sugar in it. Because we've all developed such a—not me or you, and many people that are watching haven't—but as a general rule, Americans have developed such a sweet tooth that they put sugar in everything. You're looking at crackers. And one of the ingredients in crackers is sugar. You're looking at chips. One of the

ingredients in chips is sugar. It's like they put sugar on everything now.

So people ask me, "What are some simple things that I can do to help prevent cancer?" And the number one thing you can do is stop eating sugar, stop eating refined sugar. Now, I'm not saying don't eat fruit, because fruit has natural sugar, that's totally different, but stop adding sugar to the stuff you eat. And that's a good step in the right direction to begin with.

Sherry: There are fruits that they add sugar to. I've been caught out a couple times and bought something when I'm traveling. And I've tasted like dried fruit. And I'm like, "There's sugar added to the dried fruits." So that's like...

Ty: Yeah, a few weeks ago, we were shopping at Costco, and I found some dried mangoes, organic dried mangos. And I was like, "This is awesome! I'm going to get some." And then, I get home and there's sugar on the mangoes. So I'm like, "Aren't they sweet enough without it?"

Sherry: Yeah! Yeah, it's crazy.

Ty: So, yeah. Mmm hmm.

Sherry: So are there some sugars that are harder on the body than others? And particularly with relationship to cancer, are they all pretty much, of the refined ones, we're not talking about fruit now, are there some that are worse than others, in your opinion?

Ty: Yeah, when you look at something that has not only a negative effect on cancer cells and the immune system, but also something that's very hard for your body to process, it's high-fructose corn syrup. That's one to definitely stay away from. So you've got different levels of badness, I guess. So if you're going to have sugar,

then you want to get organic. I don't eat sugar enough to even know. But it's like the brown sugar. It's not brown sugar. But it's like the cane sugar.

So anyway, it's not refined. It's not white. Okay. So it's like the less refined sugar. That's not as bad. But then you get to like the white sugar that looks like salt, that's very, very, very refined, and probably genetically modified, too, if it's from sugar beets because those are GMO. That's really bad for you. And then, you've got something that's almost like a chemical makeup of high-fructose corn syrup. It's not natural. And it's not just sugary sugar either. I remember seeing this commercial years ago with this lady. She's out in the cornfield. And she's like, "I wondered about high-fructose corn syrup, and so I talked to my doctor. And he said, "Sugar's sugar."

Well, that's not true. That doctor doesn't know what he's talking about or the actress just made it up or the scriptwriter made it up. But that's not true. High-fructose corn syrup has a horrible effect. It's a cascading effect on your body. It's been directly linked with obesity. It causes all kinds of problems with insulin in your body. It causes pancreatic problems. It causes digestive problems. It gets caught up in your liver. Your liver's not able to process it very well. That's something that you should never eat.

And the problem is, Sherry, that if you look, and it's almost like there's this insidious force behind packaged foods. And I'm not saying that there is. But it's just like it's in so much stuff. And it's because it's cheap, like corn subsidized, that's the real reason. But you look in chips and crackers and all these packaged foods, and you'll see high-fructose corn syrup added to it. Well, the reason is it's cheaper than sugar because the corn

is subsidized and it's a little bit sweeter, so you don't have to add as much. So it saves them a nickel a bag or whatever.

So the food manufacturers know people want something sweet. They add the high-fructose corn syrup. It saves them a nickel a bag or a penny a bag or whatever, which multiplied out is a billion dollars over the course of the year. So they increase their bottom line. That's the reason that they add it.

But the sad thing is that you can't really... Like, 50 years ago, if you bought crackers on the shelf, it's just going to be, not really live food, not really good for you, but not nearly necessarily all that bad either. It's just dead food. Now, you buy stuff on the shelves, if it's not organic and you don't check the labels, it can be really, really, really bad for you, even though it tastes good.

And that's the real problem is that now we're forced to all... You've got to read every label. And even I don't read all the labels. I bought something at Costco. It had sugar added to it. You don't think they're going to add sugar to mangoes or dried papaya or dried pineapple, but they do. So you just got to read the labels. But that's the problem is high-fructose corn syrup is they put it in everything nowadays.

Sherry: And what about artificial sweeteners and the connection to cancer? They're processed in the same way we process high-fructose corn syrup or cocaine or high-processed drugs.

Ty: Sure. Well, for a while, we were thinking that Splendor was kind of bad, but not all that bad. But now, they're showing a link with Splendor or sucralose to cancer. We've known for decades that NutraSweet or Aspartame have been linked to cancer and holes in the brain and neurodegenerative diseases and so

forth. They knew that back in the '70s when G. D. Searle was trying to get Aspartame approved.

And the FDA kept rejecting it because they tested it and found that it ate holes in the brains of the monkeys and rats they tried it on. So we've known for a long time that Aspartame's something you should never touch. And then, they changed it. Somebody acquired them. And Aijinomoto from Japan, I think acquired the rights to Aspartame. Then, they changed it. And then, they called it something else.

So you watch out because they may not call it Aspartame on the package. They may not call it NutraSweet. There's different names for it. But we know that that's been linked to holes in the brain and cancer. And now, that we're starting to see this Splendor, and saccharine, of course, we know that saccharine back 30 years ago was linked with cancer. So that's the three main artificial sweeteners that you're going to see is NutraSweet, Aspartame, Splendor, and saccharine. Saccharine's still in a lot of stuff. All three of those have been linked with cancer.

Sherry: Cool. The other thing around the volume of sugar, even if it is natural, say it's fruit or dried fruit... I had heard something. And I haven't researched it.

And maybe you can comment on this. But there was some comment about people who were fruitarians—so that's all they subsisted on was fruit—and an increased link to pancreatic cancer because of the load on the pancreas because you're not necessarily eating food in context of what you would in nature. Have you, in your journeys, discovered anything around that piece?

Ty: I haven't done any research on that particular question, but just

an anecdotal story. I did know... We used to live in Panama, Central America. And I did know a lady that was fruitarian. And she died of pancreatic cancer. So just it doesn't mean anything. It's an anecdotal story.

And so when the people ask, "What should I eat?" eat a little bit of everything good, right. Don't just eat one thing all the time. Change up your diet and change according to the seasons. And so as something's going out of season, something's coming in, so eat the things that are ripe and in season because, it's not only going to help your body to not just get used to something, because then you adapt and you don't get the nutrition from it because you're always getting it.

So your body needs to constantly be eating different things. But by eating things that are in season, they're going to have phytochemicals and phytonutrients and different substances in them that are cancer protective that you might not even know about. Like, for instance, there's a substance in several fruits that's called silyvestral that's only produced when that fruit gets ripe on the vine. And you pick it and eat it. And it's cancer protective.

But if you're eating things that are out of season, and they're shipped from Argentina, they pick them green there, and then, they ship them. And then, they get to you in a few weeks. And then, sometimes they'll spray glyphosate on them to help them ripen and all kinds of crazy stuff, believe it or not. But then, they look ripe on the shelves and you buy them. But they didn't ripen on the vine, so they're missing all of those nutrients that you would get if you grew your own or if you picked it off the vine when it was ripe. So just another reason that you should vary your diet, eat what's in season.

Sherry: Perfect. You mentioned at the beginning of our interview, you were talking about the love/fear thing and more esoteric things. Like, I want to go there more with respect to how much of our modern life is driven by fear and the stress that it creates and how that can contribute to disease within the body. Can you comment on that?

Ty: Yeah. One of the things that you can look at is you can look at populations that have high rates of cancer. And we've seen...I'm not sure the kind of studies that you would call them. They're not retrospective studies. But we've seen studies on populations that live in a highly stressful environment, not necessarily fearful, but stressful, so that their whole endocrine system's being taxed. Their fight or flight's always... Their cortisol levels are always through the roof so they're always living in a state of high stress, potentially high fear. And we see that those populations have higher incidence of cancer. We've seen that in numerous population studies.

We see that with surveys that many of the physicians that I interviewed for the Global Quest, they'll talk to their patients. And they'll find out where are their weak spots. And inevitably, the cancer patients are highly stressed and highly emotional all the time, not necessarily like I said living in a state of fear, but living in a state of stress.

And we know that, as we've measured the effects of sugar on the immune system, we've also measured the effects of anger and rage and high levels of stress on the immune system. And we know that that causes a decrease in immune function, specifically the lymphocytes that specifically target cancer cells. So we know that living in a state of constant stress, becoming angry all the time, becoming enraged—You see these

ridiculous instances of people that are on the road with these road rage.

And they'll like pull a gun and shoot somebody because they cut them off. It's like these people are living in a state of anger all the time—we know that that is compromising their body's ability, the immune system's ability to kill cancer cells. They've measured the amount that that decreases your body's natural ability to tag and kill cancer cells. So we know that that does have an effect, living in that kind of a situation, a stressful situation.

On the flip side of the coin, we've also measured those same lymphocytes, those same immune system cells after a couple of minutes of laughter, and we see that their ability to target cancer cells has been increased by up to 200% for a prolonged period of time because you just laughed. And so when you go back to, I think it was a Reader's Digest that had a section—growing up, I've been reading Reader's Digest—and it was called Laughter is the Best Medicine and you're just reading jokes and laughing.

And there's something to be said about that. Laughter is good medicine. And we know now that was just something that we said for a while. And you feel better when you laugh and you're looking through rosy glasses whenever you're laughing and you feel like things are good when you're having fun. But we now can measure that with our scientific abilities. And we know that laughter actually does stimulate the immune system and increase your body's ability to get rid of the bad cells in your body.

Sherry: Cool. Now, most people I know that I have worked with or spoke to, when they get a cancer diagnosis, the first thing that tends to happen to the body is they're

literally flooded with all those fear—chemical and hormones. And then, when they're in a system and they're surrounded by family, it feeds that fear—fear, the atmosphere, and environment energy.

If someone has had a diagnosis, one of the things I do is I often refer them to your site and your resources because I think it's so encouraging about what people can do, but just apart from that, what are some strategies or tips you can help people? Because what I've noticed is there seems to be two types of people when they get that diagnosis, the ones that are running away, that fear thing, or those who are moving towards love. And it seems to move into that loving space is really hard. How can people do this?

Ty: Right. I think that the key is that you don't believe everything that your doctor tells you because as we mentioned earlier, Sherry, many doctors are coming from a place of fear, too, because they don't know how to treat cancer well. So that fear has a tendency to rub off on you. And the last thing that you need, if you're diagnosed with cancer, is to be afraid. Cancer doesn't need to be a death sentence. Okay. There's always hope. But you've got to know what to do.

And so the first thing is don't believe the doctor. If the doctor pronounces a death sentence on you, reject it, because the doctor's not God. And so if a doctor says, "You've got three months to live," "Well, what do you mean? How do you know this, right? You didn't make me. And you're not going to tell me when I'm going to die. You're not going to put an expiration sticker on my toe," so just reject that.

And I do know specific examples of physicians that I've interviewed

that had taken on a cancer patient that was told by the oncologist she had three months to live. And they believed it. And they died in three months. And they died without cancer. And even situations where the coroner would call the physician, and say, "You sent the wrong person. This person does not have cancer. I can't figure out why they died." And the doctor says, "No, that's the right person." So in other words, they'd been cured of cancer, but they internalized this belief that they were going to die, so they still died when they were supposed to by the oncologist, even though the cancer is gone. It shows the power of belief.

So the first thing you need to do is not believe the doctor if he says you're dead in three months or six months, they do not know what they're talking about. They just don't understand how to treat cancer. And so once you reject that false diagnosis...I'm trying to think, it was Dr. Patrick Quillin said, "Accept the diagnosis, but reject the prognosis."

So accept the fact that you've been diagnosed with cancer, but don't listen to them tell you that you're dead in a few months or whatever, that's not reality. So then at that point, you need to look at what you're eating, what are you drinking, where you're living, look at your toxic exposure, figure out what you want to do to treat the cancer, don't be forced into the treatment, don't be forced into chemo/radiation if that's not what you're comfortable with.

There's a whole host of decisions that you have to make, but they all follow the mind. And the mind, you have to tell yourself, "I'm going to beat this." And you will. And the mind really has an amazing ability to heal. But you have to believe that internally. And then, you figure out where you want to go from there. It would take me

another 15 minutes to go through what you should do. But initially what you should do is reject any prognosis of death because the doctor does not know that.

Sherry: That reminds me of a quote that I heard, where people can live with the cancer, they just can't live with the prognosis.

Ty: Exactly. Well, exactly. And many people do live with cancer their whole life. And so when we look at cancer, it's the immune system's failure to recognize certain cells. And so the cells have become a tumor. And the body walls that tumor off in an attempt to keep it from spreading. So the key is not, "How do I get rid of the cancer, but how can I live a good life with cancer?" Because we all have cancer. Everybody has cancerous cells. Some have big tumors, some don't. But we all have cancerous cells. We're all living with cancer. It's just how can I control it and live with it?

And, for instance, prostate cancer is a good example. So when you have prostate cancer, you're diagnosed. Oftentimes, a man's diagnosed by having an elevated PSA. PSA stands for prostate specific antigen. The interesting thing is it's not prostate specific because women can have elevated PSAs. And they don't have any prostate. So it's not really prostate specific. It's just a measure of inflammation. So a man will have an elevated PSA. And then, they biopsy.

They start radiation. They start chemotherapy. And they treat him for something that the inventor of the PSA test, his name is Dr. Thomas Stamey, he said, "You might as well biopsy a man for having blue eyes," because almost every man has an elevated PSA, but not all of them have prostate cancer. And even if they do have prostate cancer, 80 plus percent of

them, well actually, it was 90, I think 97% of them, I think 3% of men with prostate cancer will die from it. Ninety-seven percent of men with prostate cancer never show any symptoms, and will die from something else, not the prostate cancer.

So really, I think that should be the focus, "How can I have a fulfilling life, even though, I have cancer?" It shouldn't stop you from being able to do anything. It's just, "What do I need to do to control it?" It's not really curing it. It's just, "How do I control it and live a full life?"

Sherry: Thank you. I know that you have talked to hundreds of experts and thousands of people who've successfully been in remission, healing their tumors, and things like that. And sometimes when people get the diagnosis... I've talked to medical professionals and just people who say, "Well, there just isn't a lot of cases of things healing naturally." And yet, I know you've witnessed that. And so people need to have a greater sense of how successful you can be with alternative therapies. Can you shed some light on that, and success stories?

Ty: Sure. What I have found over my travels is I have not encountered many people that have healed from the traditional treatments. That's what I can't find. There's people, of course, but I have not met many. And inevitably, the story that I get...And I traveled to Riga, Latvia last year. We traveled to the European Virotherapy Center there in Riga. And for those that don't know where Riga is, it's adjacent to Russia. It's just west of Russia. It's east of Sweden across the Baltic Sea. It's like what we would consider to be an Eastern Bloc nation. I was anticipating going to Riga, and finding concentration camps and stuff like that, hoping I didn't get nabbed by the communists. That's

just the perception that we have here in the United States of Eastern Bloc nations.

Let me tell you something, Riga is one of the most beautiful cities in the world. Latvia is an amazing country. They don't have genetically modified organisms there. They don't use pesticides on their food. They don't have obesity. I didn't see an obese person in the city of Riga. I was there for four days, a city of a million people. I didn't see an obese person. Okay. So all that to say, it's an amazing place.

But we visited the Virotherapy Center there in Riga. And what they're doing is they're using healthy viruses to treat cancer. One of the viruses that they're using is called RigVir. It's short for Riga Virus—RigVir. It was discovered about three decades ago by a professor named Aina Muceniece in Riga. I actually met her grandson. He heads the clinic there. And I was able to interview numerous patients that they have.

One of which, her name was Zoya. She's a Russian from St. Petersburg. And she was diagnosed with terminal cancer. She went through round after round of chemotherapy. The oncologist in Russia sent her home. Well, actually called her family to carry her home because she couldn't get out of bed. She couldn't walk. And she was told that she had two weeks to live and to get her affairs in order. There was nothing they could do. The chemotherapy had stopped working and so forth.

So they carried her to the car, drove her several hours through the snow to get to Riga, Latvia. And they put her on this RigVir treatment. And by the way, when the pathologist did the blood work for Zoya, he sent it back and said that they had given him the wrong blood. The blood that he had got was the blood of a

dead person. That he needed blood from the live person. And they said, "No, that's her." So she was really, really close to being dead by her blood work.

So within a month, she was walking. Within a year, she had no sign of cancer. I interviewed Zoya at about five years out. And she was completely healthy when I interviewed her last year. And she said the thing that's the most sad for her is that after she went through a year of treatment with RigVir, was back to normal, and after she was told that she had two weeks to live. She went back to Russia.

And everyone that was in her oncology ward was dead. All of her friends had died because they were doing chemo. She told her oncologist, by the way, Sherry, she told the oncologist in Russia what she had done. He told her that it was most likely not the RigVir that had healed her, but it was the delayed reaction to chemotherapy. That that's what had healed her. Even though, he had told her personally that the chemotherapy wasn't working, and that she would need to go home and die, regardless.

So that's the story that I hear all over the world is from patients that have done these natural treatments. And they're the only ones left. And all of their friends that were doing the traditional treatments with chemo and radiation are dead. That's the story that I get everywhere I go.

Sherry: I'd love to talk about fear as a motivator and love as a motivator. What I've discovered just with working with people, and I wonder what you've observed, is often we're living lives that often we've made decisions based on status, money, power that aren't making us happy. And I think for Sweet Freedom part of the corrective piece is to design a sweet life. Can you tell me some

stories, maybe even your own, about how cancer has actually been a motivator to move to a much more loving way of them actually being in life and designing a life around that?

Ty: Sure. I don't want to list people's names specifically, because a lot of them were off camera, but literally dozens of people that I've interviewed over the...I've interviewed I guess in excess of 500 people over the last three years, so literally dozens of people have told me that cancer was the best thing that ever happened to them.

And as weird as that sounds, if you just got diagnosed with cancer, you don't think, "Oh, this is awesome!" But once they've gotten through cancer, and they've come to a place where they've accepted it, they've changed their lifestyle, they've changed what they were eating, they've changed their mental attitude, they're getting up each day being thankful for each day, and so forth, once they get to that point, they look back and they see, "Wow! This was really a positive experience on my life."

I don't have cancer personally. But I can say that looking back on the death of my parents that that has been a positive thing on the world because if it hadn't been for that, then none of this would have happened with the Truth About Cancer because I would still be a CPA somewhere. So I guess the point of everything is that we get these obstacles that come in our path, we get these things that happen in our life, and we can either ball up in fear, and we can say, "Woe is me. I wish this hadn't happened," and feel sorry for our self.

Or we can say, "All right, this has happened for a reason. How am I going to make good out of it? What am I going to be able to get positive out of this? How am I going

to be able to change my life or use this potentially negative thing as a positive thing?"

And I think that's the message that I've heard over and over from these cancer patients is that they took something that most people would look at as a really negative thing, being a cancer diagnosis, and they turn it into, "This is a wakeup call for me that I need to change my habits. I need to change my belief systems. And in the end, I'm going to be a better person because of it."

Because the reality is that the way that we treat cancer from a conventional standpoint with chemo and radiation is we're really treating the symptom. So the symptom is the tumor is the body. And so if we can shrink it with chemo or we can burn it with radiation, and get rid of that tumor, then the treatment was successful, according to the oncologist. But what that doesn't take into consideration is what caused the tumor?

So there's something that we're doing that caused the tumor. There's something that we've been exposed to. Maybe, it's because of our diet. Maybe, it's because of electromagnetic radiation that we live close to. Maybe, it's because of asbestos. Maybe, it's...There's a whole host of things that could have triggered that.

But with conventional medicine, we just treat that symptoms. And when it shrunk X-percent in X-number of days, then you're in remission. But we never looked at what caused the tumor. And so I think that what this has allowed people to do is say, "Hey, you know, maybe..." I know my mom and dad didn't get sick with cancer because they were eating at McDonald's every day. There was something else. I don't know what it was. But there may be somebody that's eating the fast food lifestyle every day. And they've

come down with pancreatic cancer, let's say. Well, maybe that's a wakeup call to them that they need to change their diet. And once they do, the cancer can go away. And it does oftentimes go away.

So that's just like the, it's the check engine light in your body that's gone off telling you you're doing something wrong. Fix it! And so if we fix it, we fix that root cause, then the check engine light goes away. And the tumor shrinks. And we begin to live a fulfilling life, whereas with radiation or chemo, it's basically like taking a hammer and smashing the check engine light in the body and saying, "You know, you're cured. You're in remission now because we shrunk that tumor." But we never looked at what really caused it. And so I think that's why the treatments are typically not very successful. The cancer comes back because we never looked at the root cause.

Sherry: I love that. I love the analogy of the check engine light. And that it ties into that belief that everything in the body's set up to heal and to promote survival of the species. So pain and chronic conditions are always alerting us to something deeper that's going on.

Ty: Yeah. Yeah.

Sherry: We touched on it, but I'd love you to go a little bit further into the whole piece around meaning and purpose for people when, not just people who have a chronic condition or a terminal diagnosis, but just as in a preventative thing, your observation in watching people who are living healthily in life related to their meaning and purpose and people who are a bit lost and their body's expressing it through sickness.

Ty: Yeah. Well, I've seen many instances of people that were I guess by the world's term

floundering, so really hadn't found their purpose, really hadn't found their meaning in life or whatever. And so these are number one, very unhappy people. You feel for somebody like that. And I know many people like that today. They're very unhappy people.

And I know people personally that were in that state that had chronic conditions. Literally, whether it be hypertension or diabetes or cancer or whatever, I can think of people specifically in all of those categories that they didn't treat any of those things, so they had these conditions, and they realized why they were here. Maybe they got the job that they were wanting or maybe they found their spouse or maybe they decided to go work with the poor in Africa or whatever it might be. I'm literally thinking about specific examples here of people that I've known. And that actually served as a treatment. And their chronic conditions went away.

So I don't know if that's what you're asking. But I do know of situations where people were sick. And it may have been the fact that they were sick because they were empty. They didn't have a purpose. And when they found that purpose, that symptom of sickness went away because then they were fulfilled.

Sherry: Right, that's exactly what I was wanting to touch on. The other piece I'd love you to talk about is faith and prayer as a tool for people, as for healing. How do you see that working? I know you've done a lot of work on the scientific side and research side. But you're also a devout Christian. And so I'd love you to comment on that.

Ty: Yeah. Well, as a Christian, I believe that God is our healer, not that everyone that's a Christian gets healed because if that was the case, mom and dad would still be alive. So not that that's like this magic

bullet, but I do believe that God still heals. And I believe that people get healed. They may use this substance or that substance, but in the end, it's God that heals them. But I do believe that prayer and faith and that belief in God, as our healer, does go a long way when it comes to a chronic disease. So again, we go back to that that I was talking about earlier with the belief system in our mind. And as a Christian, that's my belief.

But I know people that aren't Christians that still have a positive mental attitude. And that does go a long way to getting people healthy because the mind is what really controls our body. So we think of the mind really is like the engine of our body. And so even though, it's only right here, it goes throughout. And it runs different parts of our body. It runs the endocrine system. It runs the lymphatic system. Our mind actually controls everything about our body. And so if we think of the mind as the main engine of the body, then having that mind in a state of positive belief, peace, prayer, then it makes the rest of our body run properly.

Again, though, I have to be careful though because it's not a magic bullet to where all you have, because there are people that say, "Well, I'm just going to pray." If you have cancer, "I'm just going to pray, and let God take care of it." And sometimes, he does. But sometimes, God's saying, "Hey, you know what? You should be changing your diet. You should start exercising. You should stop eating sugar."

Or there's all these practical things that maybe God's telling you to do that you need to listen and actually act. And so it's a happy balance. But I do think that it all goes back to the belief that it's not just us, that there is a God that is going to be with us and help us to heal. But at the same

time, maybe he's giving you these steps that you should be taking in order to help heal yourself. So it's, you've got to work together, I think. And so that's why it's not an either/or. I think it's you need to do both.

Sherry: I've often seen it happen, even just in business, is that when you show up, and you're doing the work, doors and resources show up and open to you. I'm sure you've seen that.

Ty: Yeah. Yeah, well, it's a story, and I'm probably going to butcher it. But the guy's on a desert island, and he's praying for God to rescue him. And he sees a boat come by. And he says, "No, go on, God's going to rescue me." And he sees another ship come by, "No, go on." And then, he dies. And he says, "Why didn't you rescue me?" He said, "I sent three boats. You turned them all away." I butchered the story. But you get the drift.

Sherry: I get it.

Ty: There's things that come into our path that we have to do a little bit of action on our part.

Sherry: Yeah. So the last question I want to leave you with, apart from how people can get in touch with your work, is with all the information that you've been exposed to, with all the life stories and the experiences, if you were to use wisdom as an overarching umbrella, as a piece of wisdom that you can share with people around the whole piece around sugar and cancer, what would it be that you'd like to share with us?

Ty: Well, Sherry, it's interesting that you said let's end with a piece of wisdom because sometimes I will address the difference between knowledge and wisdom when I speak to people. And the difference in knowledge and wisdom is that, now if you've watch this you know

that sugar's not something you should be eating on a regular basis and you know that you should stay away from high-fructose corn syrup and you should stay away from Aspartame, and so forth. We've talked about that.

Wisdom then is taking that knowledge that you have in your head and implementing it. And so the wisdom that I would share is be wise. Take this knowledge that you've learned and implement it into your life because you can have all the knowledge in the world, but if you don't implement it through wisdom into your daily practices, it won't really do you any good.

And I'm sure that, Sherry, you're going to interview a lot of other people that have tidbits that are important for people to not only know, but to be wise and implement in their lives. So I would encourage people to just to implement the knowledge that you're learning a little bit at a time. And in the end, that is wisdom, that's implementing that knowledge, and admitting it can do you some good because it doesn't do you any good in your head if you don't act on it.

Sherry: Fantastic! Thank you so much for your time with me today. Ty, I'm sure everyone's grateful for this information. How can people best access more of what it is that you've been contributing to the planet?

Ty: Sure. Yeah, thank you, Sherry, I appreciate the kind words. People can get ahold of me on the website, TheTruthAboutCancer.com. And there's a contact information there on the website. You can send me an email and it'll get to me. It may take a few days, but it'll get to me.

Sherry: And there's tons of resources there, too.

Ty: A lot of resources there. Yeah.

Sherry: Yeah. Yeah. Great. Well, thank you so much for your time. I'm really grateful.

Ty: Thanks, Sherry, appreciate it, keep up the good work.



Sugar and Healing the Gut

Sherry Strong with Vincent Pedre, MD

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The purpose of this presentation is to convey information. It is not intended to diagnose, treat, or cure your condition or to be a substitute for advice from your physician or other healthcare professional.

Sherry: Hi, I'm Sherry Strong, and welcome to the Sweet Freedom Summit which is all about helping end sugar addiction for good. Today, I'm speaking to Dr. Vincent Pedre. And he is the medical director and founder of Pedre Integrative Health and the founder of Pedre Wellness. Medical advisor to two health tech startups: MBODY360 and Fullscript.

And he's also in private practice in New York City since 2004. He's a clinical instructor in medicine at the Mt. Sinai School of Medicine and also certified in yoga and medical acupuncture. He believes the gut is the gateway towards excellent health. And for this reason, he wrote the book *Happy Gut: The Cleansing Program to Help You Lose Weight, Gain Energy, and Eliminate Pain*, which helps people resolve their gut-related health issues.

So fantastic read by the way, and thank you so much for joining us on the summit, Dr. Pedre.

Dr. Pedre: Thank you. It's my pleasure.

Sherry: Awesome. So tell me a little bit about your story. What we're seeing now is a big trend for medical doctors to have multiple modalities of training and resources to help their patients. How did you come to have this interesting mix?

Dr. Pedre: Well, I think it goes back to my own health challenges and kind of my obsession with health overall because I was a very sickly child, so I used to get sick all the time with pneumonia, bronchitis, sinusitis, throat infections, over and over. And as a result, this was back in the 80s, and it was just very standard care to give people antibiotics. And so, I was on so many rounds of antibiotics as a teenager that it wiped out my gut microbiome, and I developed food sensitivities that I was not aware of.

My parents were doing the best they could, but I was eating a diet that was high in dairy, lots of sugar, and wheat. And it was weakening my immune system. Now, I can look back with all the knowledge I have and know that was the issue. And I couldn't gain weight, so it was kind of like the opposite of what you would think from eating so much sugar in my diet. But the issue was I couldn't absorb nutrients because my gut was inflamed.

So I had developed what I thought was just a nervous stomach became irritable bowel syndrome. And it was through the work that I did over the years of becoming aware of how diet influences how I feel and my immune system and my susceptibility to infections. And then, obviously, a lifetime of work conquering my own gut issues because I was trying to figure them out for years, even in medical school.

I had taken dairy out, and my diet had become richer in healthy fats.

So I stopped getting sick as often, and I made the first connection, "Wow, I'm not having as much dairy." I was eating more whole foods, more vegetables, not as high in sweets, although I probably still had ice cream on occasion. But I noticed that I wasn't getting sick as often, and there had been a dramatic change in that one component in my diet.

Even though I went to a Western medical school where maybe we were given an hour of nutrition over the four years—I'm exaggerating, but it wasn't that much. I really started making the connection that diet plays a really strong role in how you feel. And then it was through my work later on after my training, and I trained in internal medicine and finally ended up where I wanted to be in the first place which was holistic medicine and functional medicine.

And it was through that work that I realized that gluten was an issue for me, and I really started changing my diet and cooking more at home and increasing my vegetable intake and really incorporating healthy fats in the diet. And that's what really shifted things for me with the gut and finding that I was sensitive to a whole bunch of different foods that I had to take out of my diet.

And it was through that level of commitment that I realized, wow, what it really takes to heal the gut. It can't be just, "Oh, I'm just going to try this for a month, and if this doesn't work, then I'm going to try this." No, you kind of have

to go in and maybe you don't start everything at once because if you've never been gluten-free, for example, you have to master gluten-free. And then you have to realize that gluten-free products are not necessarily good for you because they are the same equivalent of a refined starch that turns into sugar.

So it takes a little practice, but eventually you kind of have to do everything together to get your gut to heal. And it takes a level of commitment. And I wanted to do it because at that point I was preaching it to my patients, and I've always been the type that I have to walk the talk. I'm not just going to tell people to do something, and I wasn't sure, for example, that I had an issue with gluten. But I had a strong suspicion. And I think that part of me that wasn't sure was the part that was in denial because I didn't want to have an issue with gluten, because I wanted to be able to have my pizza on occasion. I wasn't a big bread eater, but have bread on occasion.

So there was that denial aspect in my brain that, finally, when I just committed and I said, "I'm just going to take this out." When I did that, I made my home a gluten-free household. So we all went gluten-free for the most part. And that also really helped, not having things around that had gluten and not have that temptation.

And I found, through this very strong commitment that I wanted to finally end my gut issues, that I was able to reverse things and rebalance the microbiome. And I went on to learn a lot after that, but I loved working with patients and their gut issues and trying to understand really fascinating things like food cravings and where they come from. Are they really in your brain or are they coming from your gut?

It was just so enriching to work with people and starting with the foundation of the gut, because you saw them get better. Often, it doesn't happen overnight. It can take at least a month, but sometimes it takes longer than a month. So it really tests people's capital P, which I tell my patients, "You know what you need? You need the capital P." And they pretty much know what it is. It's patience.

Everybody wants the quick fix, but, really, you've got to hang in there for the long haul, especially when you're working with gut issues and the microbiome. Because, even though it can shift quickly, to get those changes that really embed themselves and are long-lasting, you have to commit to a program. And you have to do it for at least four weeks in my opinion to really start to heal the gut.

And I ended up that's how my quest started, and at the end of four weeks I was feeling so good that I said I'm going to continue another month. And at the end of the second month, I was feeling so good and so clear-headed. I didn't have that post-lunch just energy draw that would happen where I felt like I had to take a nap. And that was also with cutting out a lot of sugar in the diet. And I just kept going. And next thing I knew, I just decided—well, it was three months, and I decided I'm going to do this for six months before I start testing out foods and see what I can bring back.

And now, that was eight and a half years ago, and I never brought gluten back. We have to live in reality, and so, I do allow myself to have gluten on special occasions like over the holidays. And honestly, it's enjoyable for that moment, but I do sense that it has an effect on me. So I tend to avoid it. And most recently, it's great that we're talking because I had what I call the drift in

the diet. So you can be good for a while, and then slowly you start to loosen the boundaries. And slowly, you start walking over back to sugar, and I was letting myself have too much sugar.

I had launched my book last year, and it was a stressful year for many reasons. My dad had passed away, and I just really kind of gave in. And at the beginning of this year I had started a group cleanse with a group of people, doing my Happy Gut cleanse. And again, I'm the walk the talk person. I wasn't going to just walk people through the cleanse and not do it myself. I had been drinking coffee every day, which I didn't like, for the good part of the year. And so, I weaned myself off of coffee right before the cleanse, so now I'm just on tea. And I cut out sugar, so no sweets. And guess what my energy did? Sherry: Through the roof.

Dr. Pedre: My energy went up.

Sherry: Yeah.

Dr. Pedre: It didn't go down, and actually after a while of having green tea in the morning, it started getting some mornings—I love to do this morning smoothie that I pack in. Every day I make something different. But I always like to put some sort of green. And like this morning I put—maybe a green that people wouldn't even think of putting in a smoothie. I put basil in my smoothie, and I added some Brazil nuts along with almond milk and frozen blueberries. And that combination of nutrition that I get in that smoothie feels like a cup of coffee to me. It gives me so much energy and such clarity that now I could have a cup of tea for the caffeine.

And I thought I was caffeine-dependent, but I don't need it. I could pass on the cup of tea. And I have way more energy, and

thankfully it's very recent that I was on coffee so I can remember. The drift happens when you start forgetting, and you're like, "Well, why not? I can have this, that." And then next thing you know, you're back to where you were: the place that you didn't want to be.

Well, I remember when I had coffee I was having an afternoon slump. And it was getting to the point where I would be thinking about another cup of coffee after lunch. And sometimes I would have a decaf, but still, my body was dependent. And I would wake up thinking about my first cup of coffee for the day. And I was really into it. I wasn't using any sugar. Sometimes I added a small amount of honey to it but mostly not. And I was doing the Bulletproof coffee with the grass-fed butter and the MCT oil.

But the problem is if you're like me, if you're a slow metabolizer which I am, a cup of caffeine feels like a jolt of energy and you feel jittery and anxious inside. And that's how I always was. I went to medical school, and while all my classmates were drinking coffee, I never drank coffee throughout medical school. I didn't even understand why they needed it because I always just had a lot of energy. And now, I'm back. I have all this energy. I'm off of caffeine.

So for anyone who's watching—I know this is about sugar—for a lot of people, having their cup of coffee is combined with a teaspoon or a block of sugar or Sugar in the Raw. Or they're getting a latte which is sweetened. I don't know if I can say Dunkin' Donuts and getting something that is really sweetened. So the coffee is always kind of linked to sugar. And to be able to be off of that and see that my energy is incredible. I feel great.

Sherry: Great.

Dr. Pedre: I try to be an example

for my patients and then inspire them to go on their own journey.

Sherry: So for those of the listeners that haven't yet read the Happy Gut, can you explain to us why the gut is so important and integral in overall health?

Dr. Pedre: Well, to start, it's your biggest inside/outside surface if you think about it. It's our biggest interaction with the world, especially the world of microbes and our nutrition internally. And because of that, it's also the place that has the greatest potential for inflammation. So you can get something called post-prandial endotoxemia which is basically toxins coming into the body after you eat. And obviously, that's going to be augmented by the types of foods you eat.

So if you're eating a burger and French fries and a Coke, that's going to cause pretty severe endotoxemia. And it affects even the flexibility of your arteries, and eventually it can lead to high blood pressure. But have a bowl of broccoli, and you don't get that post-prandial endotoxemia that you see with these other foods. So the gut being such a huge surface area and so integral to breaking down our nutrients and then absorbing them and giving the body the protein, the energy that it needs in order to function, it is so essential.

And now, we're learning how the gut microbiome controls the amount of calories that we absorb but also controls our insulin sensitivity as well. So it's really amazing the key and integral role that the gut plays in so many things, including mood. I see it connected to allergies, asthma. I just had someone just write me an email out of the blue to Happy Gut and just wanted to say that her adult asthma had been basically reversed by doing the 28-day program which

cuts out sugar, which basically gets people on a whole foods diet and takes out all of the foods that are inflammatory and gets them eating whole foods like plant-based foods. If you eat meat, then eat meats that are not factory-raised. So really, the emphasis is on finding the cleanest diet that is the right diet for you, including drinking clean water as well.

So a really broad point of view, but going back to the integral role of the gut, if any part of the system is out of order and for a lot of people they suffer from a deficiency of stomach acid, so they don't produce enough stomach acid. Or they're on an antacid which is limiting their stomach acid production, and that is one of the most prescribed medications out there are these acid-blockers.

I don't know about Canada, but a lot of them now are over-the-counter which is crazy because people can take them forever. And they cause calcium malabsorption. They cause B12 deficiency. But guess what else they cause. They can cause a dysbiosis which is an imbalance between good and bad bacteria. They can lead to small intestinal bacterial overgrowth. They can lead to yeast overgrowth in the gut which we all know what does yeast feed on? It feeds on sugar.

The other thing is that that brain-gut connection like who's in control? And if you're craving sugar, is it your brain craving sugar? Or is it your gut craving the sugar, telling your brain to eat more sugar, whether it's in the form of actual sugar/sweets or it could be that you crave bread. A lot of people, they don't crave sugar; they crave bread. Or they crave potatoes or they crave comfort foods, what we call them. Mashed potatoes. And they don't realize that they're eating sugar. What they're craving is sugar; it's just in a different form.

Sherry: This is going to sound like a simple question. Apart from the discomfort part, like if you have a gut that's sad or it's not healthy, does a happy, healthy gut actually make us a happier person? And does an unhealthy gut make us a sad person? Does it actually affect our moods?

Dr. Pedre: I think that's a really great question. Just think of a day when you had a really bad stomachache. And if someone who hadn't seen you in a while sees you, they'll see that the color has changed on your face because the gut is reflected here in the center of the face. And you can see people who have issues here like rosacea that's a redness in this triangle region of the face that that's usually connected to the gut.

And so, no, this is a really great question because I really do believe—and this was my life quest—that having a happy gut also creates a happy body and a happy mind. And it's not just because—and you want your gut to just work in the background and do its job without causing upset. And this is such a vital region here. It's below my camera, but it's a really big energy center. We talk about gut feelings and listening to your gut and the intelligence of the gut which is an intuition that comes more slowly than the mind which tends to react really quickly.

But the gut also is probably the biggest source of neurotransmitters from the gut microbiome. So there are more serotonin receptors in the gut than there are in the brain. But the gut microbiome can produce neurotransmitters that get absorbed, and they circulate across the blood-brain barrier and they go to the brain.

For example, we know that a strain of lactobacillus, which is one of the most common strains in the gut

and it's also found in fermented foods like yogurt, one strain is a producer of GABA. GABA is a neurotransmitter that helps you relax and tells everything to quiet down. So just imagine that if then you have an imbalance of that particular bacteria and you're not producing GABA, maybe you're producing too many excitatory neurotransmitters.

So there is a direct connection. I think we're evolving and understanding that better. I see it all the time with patients that are depressed. They're not feeling well. You go through their diet. They're not eating right. You get them on a diet that is more plant-based with healthy fats, so their bodies can synthesize hormones from coconut oil, olive oil, things like that. And it doesn't take that long and you can see a shift in their disposition.

Now, mood is complex, and there can be a lot of things that affect someone's mood, including repetitive, negative thoughts and beliefs systems and trauma, post-traumatic stress. There's a lot of things that can play into that. So if you look at it that way, then I think of the body as a pie. And each piece of the pie plays a key role, but if you want someone to feel whole again—you want to be whole—you have to address each portion of that pie.

And the gut is one aspect of it. But you also have to address lifestyle issues. Are you going to bed at the right time? Are you giving yourself the time to nurture yourself in a way that is in sync with your biological rhythm? A lot of people think that they're nurturing themselves by sitting in front of the television at night after they get home from work, but that onslaught of EMFs and all that negative news that's going on, that is not relaxation for your biological system.

When you need sweets and when you're craving sweets, a lot of times there is an emotional connection to it. And sometimes I will ask my patients, "Well, where is the sweet in your life that does not involve food? What is missing? Where are you not being kind to yourself that could give you that sweetness that you're trying to acquire by eating it but it never fulfills it? It's a bottomless pit."

Sherry: Thank you. So what we eat is the greatest source of nourishment, but what we ingest can also be the most damaging and toxic thing that creates inflammation. In your opinion, what foods are the most toxic and taxing on your gut and why?

Dr. Pedre: That's a great question. Well, we know that gluten now and the protein gliadin in gluten is a major problem for the gut. And it stimulates a certain type of communication signal called zonulin that controls the permeability of the gut. And we know that what gluten does is that it increases gut permeability.

And there was a study that looked at whether there was a difference between normal people, people with celiac disease which is a complete intolerance to gluten, and a group that was what we call non-celiac gluten-sensitive. So they're not normal. They don't have celiac, but they do have a sensitivity to gluten. And they looked at how much gluten increased the permeability of the gut for each of these groups or whether it did or not.

And they found that, as expected, the celiac patients, which is an autoimmune disorder where the body attacks the gluten protein, but then also as a bystander it ends up attacking its own proteins and the gut. So you lose the ability to absorb. The gut surface which is kind of like

fingers, these villi, they get flattened out. So just see like this is a much greater surface area, and if you do this and it's flat, you just lost a lot of contact with your food to be able to absorb nutrients. And that's what happens with celiac disease.

And the way I describe gut permeability is if you imagine—everybody knows what a cheesecloth is, and we use it to... Maybe you're making an almond milk, and you want to strain out the little pieces of the nut that remain. Well, imagine that the gut wall is like a cheesecloth with really tiny holes, and it's allowing the small nutrients to get through, the products of digestion. But it's not going to allow a protein that hasn't been completely digested to get through. It's like a gate.

But now, take the cheesecloth and make the holes bigger. That's what leaky gut or gut hyperpermeability is. Now, there are holes in between the cells. And that allows for more molecules to get through that can then aggravate and stimulate your immune system. And it can also allow for yeast and bacteria to get through. And one of the most potent instigators of the immune system is called lipopolysaccharide. It's a lipid molecule attached to sugar residues that is released from certain bacteria. And that is a huge stimulator of the immune system and people with leaky gut syndrome and this sort of impaired gut function.

So going back to the study with the three groups of people. So we had the normal, we had the celiac patients, and we had the non-celiac gluten-sensitive. So celiac here in the US, we think it's about 2% of the population. Non-celiac gluten-sensitive is about 10%. I suspect it's more than that. And then the rest of the people are normal.

So they found that the celiac

patients had the greatest increase in permeability in response to gluten. The non-celiac gluten-sensitive had an increase in permeability but not as great as the celiac patients. But guess what, and this is the one that makes people go, "Hmm." The normal patients, they also had a slight increase in gut permeability. It wasn't the same as the celiac and the non-celiac, but it was increased. It was not normal. And that tells you something, because over the last 50 years we've hybridized the wheat plant in a way that has increased its gluten content. And I think we just didn't genetically evolve to be able to handle that gluten load. It's a very difficult protein to digest.

Sherry: I was going to ask you about that because there are people who have gluten sensitivities who can't touch food in North America, but they go to Italy. And they have pizza or pasta, and they don't have the same reaction.

Dr. Pedre: It's a different grain. So they're not using the same wheat grain. And I found that also with people from India because they use more of an ancient grain. If they have the ancient grain that's used to make their bread, they don't react. They use the wheat from the US, the processed bleached flour, and they have a reaction. And as a gluten-sensitive patient, I found out when I went—my patients were telling me that.

And I traveled to Italy, and, of course, when you're in Italy how can you not have a pizza or some pasta? Even though there's a lot of amazing food in Italy, you could just navigate and not have any pasta or pizza if you wanted to. There's so many fresh vegetables. But I did, and I did not have a reaction while I was there. And I know what my reaction is, and I know pretty immediately if I have anything here in the US. That's why I avoid it so

much. But, yeah.

And that brings up another point is that stress is a big factor. So I find that people react differently, for example, and I'm going to tie this back to sugar now. I have a patient today that suffers from hypoglycemia which means her blood sugar drops. And we've been working on regulating the way that she eats, and part of it is incorporating more healthy fats because fats give you sustainable energy. And they help keep your insulin levels steady, and they help keep your blood sugar levels steady so you don't have those drops.

But she noticed that if she gets really riled up and anxious that her blood sugar drops, and she gets those hypoglycemia symptoms. So interesting that stress can have that effect, but we know that there are receptors for these neurotransmitters everywhere in the body.

But the other thing I was going to mention—so going back to sugar—is that sugar feeds the bad bugs in the gut. And not just regular sugar. If we're looking at the artificial sweeteners, they create the type of gut milieu that promotes the microbes that will cause weight gain and insulin resistance. Like, what?

The complete opposite of what you think from artificial sweeteners which have been marketed to health-obsessed people that want to lose weight, but they also want to have their cake. They want to taste the sweet while losing weight. And unfortunately, these so-called diet drinks are really not diet, and they've been found to increase the risk for diabetes, for cardiovascular disease, for stroke. So in some ways, they might actually be worse than having regular sugar, not that I would encourage anyone to go out and drink soda at all. I take all my patients off of soda.

But regardless, regular sugar—and that does not have to be... Again, going back to a lot of people think that sugar's just sugar and they don't look at a piece of white starch, white rice, white bread as sugar. But that can promote a dysbiosis, so an imbalance of good and bad bugs and especially feeds yeast.

And once you have a yeast colony going on in your gut, it starts getting more and more territory. It gets bigger and bigger. And guess what it does. It tells your brain that you want more sugar. And it's not like the brain is saying, "I want sugar." The brain might be saying, "I crave bread. I just want to eat bread." And the person doesn't know why. And this is not 100%, but I've seen it with a couple of patients. And I think where it's been clearly that there was an issue with yeast overgrowth, you fix the yeast overgrowth usually either with an anti-fungal or with either medication or anti-fungal herbs. So I may use a combination.

And you get the yeast down. You populate the gut with good bacteria, and they come back and tell me that their sugar cravings are gone. And it's pretty amazing to think because it happens so quickly that it can't be just in the brain. It's not just in the brain. Now, we know from studies done I think with rats or mice that sugar is more addictive than cocaine, and that's because of the reward center in the brain. So sugar and cocaine stimulate the same dopaminergic reward centers in the brain.

The brain of someone on cocaine lights up the same way as sugar. Now, these mice, they chose to drink the sugar water over the cocaine. They actually preferred sugar. Sugar is a really highly addictive substance, and our consumption of sugar, and I know I'm preaching to the choir. Your audience probably has heard this. But our consumption of sugar

compared to where it was in 1900 is magnitudes greater. It's ridiculous how much sugar.

And you cannot go down a supermarket aisle without seeing sugar in almost every packaged food. And they try to hide it in different ways as maltodextrin or high fructose corn syrup or dextrose. It's given different names, I think, to confuse people so they don't know that there's sugar in what they're buying.

Sherry: Michael Pollan—I love his work. But he says, "Don't eat anything your grandmother wouldn't recognize." But your grandmother would recognize sugar, and there are sugars and flours that have been genetically modified. Tell me how do they actually affect the gut? Or anything that's genetically modified.

Dr. Pedre: Well, anything that is genetically modified I think comes with a series of problems depending on the type of genetic modification. So for the listeners to understand, a genetically modified crop is a crop where a gene that is not natural to the genetic pool of the crop has been introduced into the crop to either give it some sort of resistance to a pesticide or to have the crop produce its own pesticide.

And that is probably the scarier one. There's one called BT toxin. And in the US, we have corn that is genetically modified to produce its own toxin, this BT toxin which is *Bacillus thuringiensis*. It's bacteria that lives in the soil. And this endotoxin kills insects. When they ingest it, what it does is it pokes holes in their digestive system and they die. And this is also used in genetically modified potatoes as well.

And when you genetically modify an organism, I feel like you're

working with Russian roulette because you're in a sense playing God. You think you can control how the gene stays or how the gene is replicated. You can account for the possibility that the gene will mutate or that the gene can be transferred. So we know that in the gut the bacteria they can transfer genes in these little circular—it's almost like a piece of the DNA pops out. They send a gene out. And it's kind of like a survival mechanism because, say, one bacterium in the group has acquired an antibiotic resistance gene. Well, it serves the entire community to be able to acquire that gene, and it can go from one to the other. And that's how you get antibiotic resistance that gets stronger.

So the thing with this BT toxin is that not only does it poke holes in the digestive lining of insects... And a lot of the arguments for these genetically modified crops are that they don't affect humans or that the pesticide that's used on the crop does not affect us. It's kind of one of those arguments like really? How many non-human cells do we have in the body? We have approximately 100 trillion bacteria in the gut that outnumber our own cells 10:1. So we're more bacteria than we are human.

Going back to the BT toxin, this toxin, so not only does it poke holes in the digestive lining of the insect, but a study found that it pokes holes in the lining of mammalian cells. So it contributes to leaky gut which I think is one of the central issues because then how many people are on antibiotics that maybe ate a genetically modified crop? So you have these multiple insults to the gut.

And now, thinking of the other one... So not the BT toxin but the crop that is called Roundup Ready. So it's basically been designed to be able to protect itself from the

effects of this pesticide created by Monsanto that has an active ingredient called glyphosate. Well, glyphosate if you look it up is patented as an anti-microbial. What does it do? Glyphosate chelates. So that means it binds minerals. So it'll bind iron. It'll bind zinc, and it'll starve the bacteria of it for the plant. So it starves the weeds of their nutrients so they die. But the genetically modified crop is built to be resistant to this.

So the farmer can just spray away and not worry that their crop is going to die. They're going to kill off the weeds. Well, where does that pesticide go? It stays there. It gets absorbed into the food supply. It becomes part of the food supply. And one of the arguments that Monsanto has used that glyphosate is safe is because it affects an enzyme pathway that does not exist in humans; it exists in bacteria. Well, hello. How many bacteria do we have living in our gut that have that enzyme pathway? It's called the shikimate pathway.

And so, you come in and you're destroying bacteria without even knowing it. And I've seen studies where they found traces of glyphosate in blood samples. And we know also with all these exposures that the Environmental Working Group has found like over 70 toxins in the placenta of a recently delivered baby. They tested a number of women postpartum, and they found toxins in the placenta, all sorts of environmental toxins.

So it creates an imbalance in the gut. So it's just another way that it's creating this dysbiosis. And when you lose the good guys, then you lose that protection with the barrier that then causes the gut to become leaky, to become hyperpermeable. So remember that cheesecloth where the holes get bigger. So now, you don't know you have a

leaky gut. You just don't feel well. You're sick. You have allergies. You feel exhausted. Your gut may or may not be an issue. Sometimes people are not aware, or you may be bloated all the time. Maybe you have a yeast overgrowth.

But it doesn't have to be. That's why I say that my program not only helps people with gut issues; it helps people with gut-related issues because there's so many reverberations of things that are associated with the gut, including autoimmune disease which we think actually starts in the gut. And basically, all disease starts with inflammation. And our biggest potential region for inflammation is our gut based on what we're eating. The other area is our mouth and our teeth.

Sherry: So talking about the microbiome, what effect does that have on sugar metabolism? And for our listeners who may not be familiar with that word microbiome, can you explain that and its impact on sugar metabolism?

Dr. Pedre: So the microbiome is basically—I love how the Natural History Museum in New York had a whole exhibit on it. And they called it the secret world inside you. In a sense, it is. It's this other world that's existing inside of us. It's the bacteria that live in the gut. It's the bacteria that live on your skin, in the palms of your hands, on your lips, inside your airway, inside the mouth, around the teeth.

So when we talk about the microbiome, we can think of it as multiple different zones in the body, almost as if the body is the entire earth and the microbiome has all different sorts of territories. And depending on where you are in the body, there's going to be certain bacteria that we know are favorable and other bacteria that are not favorable.

So generally, when people are speaking about the microbiome, they're referring to the gut microbiome because it's the biggest microbiome, especially in the large intestine. There is a very limited microbiome in the stomach. The small intestine is almost sterile. It has about 10 to the third concentration of bacteria per gram. So when you think about that, it's a lot. But the large intestine has the highest concentration, and it also is the key part of the microbiome that controls sugar metabolism and insulin sensitivity. And it does this through the short-chain fatty acids.

And I was reading a study that I thought was really interesting because a lot of people are running on sugar energy, and I found that the body—actually 5-10% of the energy consumed in the body is being produced by our gut microbiome in the form of short-chain fatty acids by digesting indigestible oligosaccharides which are short-chain carbohydrates or fibers in foods.

Sherry: Can you tell me some examples of that?

Dr. Pedre: Sure. So these are foods that we call prebiotics. So one great example is Jerusalem artichoke that has one of the highest concentrations of inulin. But also foods like dandelion greens, garlic, onions. These are all prebiotic foods. Now, someone who has bacterial overgrowth may find that they can't tolerate too many of them because you can over-feed the bacteria. And if you take too many prebiotics, that can actually make you feel kind of bloated, gassy if your body's not used to it because the bacteria in your gut when they ferment them, they also produce gas.

Another example is what we call resistant starch which is a type of starch that forms in situations

where the protein changes temperature. So we were talking about rice and how white rice is sugar, but if you take hot rice and you cool it down quickly, the starch actually converts into resistant starch. It's quite fascinating, and I've been reviewing that and have a write-up that's coming out on resistant starch for Mindbodygreen very soon.

But going back to the large intestine, that's the key area with these short-chain fatty acids. And one of them, which is called butyrate, we know has tremendous anti-inflammatory effect in the body. But it also regulates blood sugar. We see that it helps the blood sugar come down. It increases insulin sensitivity, so insulin is the hormone that shuttles glucose into your cells. So it tells your cells to take in the sugar so they can utilize it for energy. And butyrate helps improve the sensitivity of the cells to this signal. It also has anti-cancer benefits, as an aside.

But all of this is coming from the microbiome. And the way that the microbiome can produce or for your microbiome to produce this is for you to have a healthy microbiome. And how you create a healthy microbiome, especially in the large intestine, is getting the range of vegetables in your diet. I always tell my patients to eat the rainbow spectrum of colors in their foods. It doesn't have to be in one particular day that you cover all the colors. But in the course of the week, think about varying the colors of the foods that you eat so that your body is getting the wide representation of nutrients that are needed in order to create a diverse microbiome.

So my sickest gut patients, what I see is a microbiome that has lost diversity. It's been narrowed. And for people to understand better the extent, I talked about the 100 trillion

bacteria. They outnumber our cells 10 to 1. But think about the species. There are probably anywhere between 400 and 600 different species—just think about that—of bacteria in each person.

And the range of species, there are overlaps. But if you travel around the world, like if I study the microbiome of the gut of someone who lives in Africa, it's going to be very different than the microbiome of someone who lives in Asia and someone who eats the typical American diet, which we call here in America.

And an interesting thing is if you look at the gut of someone with more of an ancient diet in Africa, their diets had probably close to 50 grams of fiber in a day. So lots more fiber. For people to put it into perspective, here in the US most people are only eating somewhere between 10 and maybe 15 grams. If someone's trying to be good, maybe they're up to 25 grams. But we should be getting somewhere between 35 and 45 grams of fiber per day. And fiber, again, comes from vegetables, from plant sources.

So this African that has a diet rich in 50 grams of fiber, that if I took you to Africa and I made you eat that diet, you would feel horrible and bloated. But the interesting thing is that the makeup of their gut microbiome is one that favors a lean muscle mass and one that does not favor weight gain and obesity. And it has to do with a balance of Bacteroides and Firmicutes. It's this balance between these two big groups of bacteria.

Sherry: Fascinating. So basically, you're saying that the microbiome can actually make you crave sugar. And the antidote for that is to get much more fiber, and whole plant foods are a big, big part of that.

Dr. Pedre: Yeah, and if you have Candida or yeast overgrowth which is probably the strongest influence on sugar cravings, then you have to starve the Candida which means you have to take sugar out of the diet. And you might have to take some anti-Candida supplements like oregano oil or caprylic acid. Caprylic acid is an MCT, a medium-chain triglyceride which is found in a smaller percentage in something like coconut oil. That's why I love adding coconut oil to my cooking. I cook with it. I add it to vegetables. And I recommend it to my patients. It's also a wonderful sugar balancer, so it keeps your blood sugar steady.

I know this may sound crazy. But if I get home and I didn't regulate my eating timing well enough and I know I'm starting to feel kind of like that crash that is going to make me crave and eat something bad, I will have a teaspoon of coconut oil while I'm preparing dinner. It doesn't kick in immediately, but within 5-10 minutes, I can feel even. And my appetite is under control, so I'm not ravenous. That's when people make the bad choices.

But, yeah, then by controlling the amount of yeast overgrowth in the gut, then you can change your cravings for not just sugar but starches. And women, especially, will know. Like if you are someone that all it takes is a dose of antibiotics and you have a yeast infection, well, it's not out of the blue that you're prone to yeast infections. You have a dysbiosis, and that antibiotic is bringing it out. You're just balancing on the edge.

And that balance needs to be shifted further towards the good guys. So a person like that really needs to be on a probiotic but also eating the right types of prebiotic food and eating fermented vegetables, fermented and cultured foods to help populate the gut with the bacteria that are going

to oppose that yeast overgrowth. They're going to keep it in balance.

Sherry: Awesome. You've given us not only some great information as far as understanding how things are working but some great tips there. Unfortunately, we don't have any more time. We could probably, I know, tap your brain for a few hours, and we'd still just be touching the surface.

So if people want to find out more about you and what you have going on, apart from reading your book, how can they find out more about you, Dr. Pedre?

Dr. Pedre: The best way to connect is through my Happy Gut Life website.

Sherry: Awesome. Thank you so much for your time today, showing us how to have happy guts.

Dr. Pedre: Thank you for having me.



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