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# Connection Between Headaches and Chronic Disease

Erin Knight, FDN-P with Jay Davidson, DC, PScD

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**Erin:** Hi, and welcome to the Chronic Headache & Migraine Summit. I'm Erin Knight, one of your hosts. And today, we'll be hearing from Dr. Jay Davidson. Dr. Jay Davidson is a doctor focusing on a natural, functional medicine approach. He's also a popular speaker, #1 international-bestselling author, husband, father, former radio talk show host, and church elder.

Dr. Jay is admired for his ability to bridge the gap between the scientific health community and the lay person. His vision to see all of the details and recommend simple, straightforward instructions to his clients has gained him tremendous respect among his colleagues. He's an expert on genomics, detoxification, and chronic Lyme disease so I've invited him to this event to help us understand the connection between these things and chronic headaches and migraines. So welcome to the summit, Dr. Jay Davidson. Thank you so much for sharing with us today!

**Dr. Jay:** Yeah, thanks for having me on, Erin. It's a pleasure to be here.

**Erin:** So I hear you started out in a chiropractic role, as a chiropractor. How did you decide to get into functional medicine? What prompted that?

**Dr. Jay:** Yeah. It definitely was not something I just woke up and said one day, "Hey, I'm going to get into functional medicine and into a whole new world." It was more just based out of my wife's health struggles. So my wife and I graduated from chiropractic school. We opened an office in Wisconsin—Milwaukee, Wisconsin area, and helped a lot of people, very large volume, over 600 visits a week. And was, I would say, successful in helping a lot of people.

And when my daughter was born in 2012, on July 4<sup>th</sup>, the bottom fell out. My wife couldn't heal. Everything just stopped and changed. And, of course, so she had Lyme disease when she was seven years old. And they didn't understand what it was and, after a while, figured it out. And ended up, she was in a coma for six weeks. And there was just a lot of health issues in her past.

And as soon as that bottom fell out, one of the first things we thought about was, "What if this is Lyme disease again?" And then, the other thing that we had lurking that we knew about was an issue, but couldn't figure out a way to detox. So it was heavy metal toxicity. And so it was basically when my wife was on her deathbed that I'm like, "You know, this is, this is my focus. This is my primary thing to figure out." And that is what shifted my focus from the structural correction

chiropractic world to more of what is probably termed the functional medicine-type world.

**Erin:** Sure. Yeah, because you, like many of us, you have this journey that you're on. And you keep looking for answers. And eventually, you'll come to something that helps. So you found that you had to address chronic Lyme disease and heavy metals to move past that. Could you tell us more about this? What she was going through when you decided to look into this? Was she suffering with headaches and migraines herself?

**Dr. Jay:** Yeah, so I know this is the Headache & Migraine Summit. And my wife was—when I met her, she could tell you when it was going to rain. That the pressure would change. And she would get a headache. And it would knock her out. Of course, just meeting her, I'm like, "What's going on?" And that continued.

And so there was a lot of, what I would consider, warning signs or other signs and symptoms that she struggled with before the "bottom fell out" leading up to her having our daughter. She wasn't able to fly on an airplane for about four years. It was probably about two to maybe three years before my daughter was born. But she wasn't able to fly just because of the massive anxiety, the pressure that would happen.

Just the thought of it. She got a lot of heart palpitations, fatigue. So just even exercising, she'd be down and out for the next couple of days, so adrenal fatigue. She was diagnosed with an autoimmune thyroid during pregnancy when the heart palpitations were going on. But they didn't really have a treatment for that. She had digestive issues, digestive gut issues, heavy metal toxicity. She was exposed to mold. So she had also what's called MCS or multiple chemical sensitivity.

So my wife's file, when she was growing up, was quite thick unfortunately from the hospital. And things just continued. And it was almost to the point, Erin, where she felt like she was always being experimented with and poked and prodded. And she didn't want to be experimented on anymore. So it was just getting by. And then, when my daughter was born, the bottom fell out.

And it was like, "Okay, it's time to get to the root cause." But headaches were a massive thing that she dealt with in her past.

**Erin:** Mmhmm. So she had all these clues. But sometimes you don't see that until you're looking backwards. I had that, too, actually. So the headaches are one thing, and then anxiety and digestive issues. And it's hard to tie them together to a certain root cause until things get really, really desperate. But if somebody does have persistent headaches or migraines right now, and they've tried a lot of different avenues to get better, why should they consider looking at Lyme disease? Is this actually a common symptom of a Lyme infection?

**Dr. Jay:** Yeah, well, I would say if you're asking me about top symptoms that clients come to me for, then I would say a vast majority of people have Lyme

disease or diagnosed or suspecting Lyme that we work with myself and my doctors, I would say fatigue is top of the list with sleep issues. Those go hand in hand. Third on the list is probably more of like the anxiety, depression, pain. And then headaches, it wouldn't be in the top, I would say, four or five. It'd be definitely in the top 10.

And so Lyme disease... Giving your listeners a little background on Lyme disease because just hearing that word Lyme can be very like "Oh, my gosh, what? You know, I'm scared. But yet, I don't understand it." So it's like this confusion place. So Lyme disease is a bacteria—*Borrelia burgdorferi*. And now, they've figured out there's a couple more strains of this bacteria that can cause Lyme disease. But essentially, it's a bacteria. And it's a spirochete. So it's a spiral shape. So it loves joints and tissues. It doesn't necessarily love the bloodstream, which can make the testing tougher. So the target organ of Lyme is not the bloodstream, which is why testing is not great.

**Erin:** [inaudible].

**Dr. Jay:** Yeah, why it's a toss-up. But Lyme disease, typically, people get diagnosed with Lyme disease as a last resort. Like, they ruled everything out. "You don't have lupus. You don't have RA. You don't have MS. You don't have this, this, this, this. You must have Lyme." So Lyme comes with over 150 different types of symptoms. Headaches, migraines are one of those. So I would say if somebody has headaches, do you have Lyme? I would definitely not ever make that correlation. If you're struggling though with--

**Erin:** With other things, too.

**Dr. Jay:** Yeah, other symptoms, other health conditions, yeah I think ruling out Lyme disease is always a

good thing, rather than just have it like, "Nothing else showed up. Let's just say you have Lyme." How about look into maybe sooner.

**Erin:** Especially if you've done the basics like cleaned up your diet, and opened the detox pathways, and cleaned up your environment, and stuff like that, and you're not seeing any progress. You have some of these other symptoms like joint pain and stuff like that, then you would want to see somebody about ruling out Lyme. Is that what you were saying?

**Dr. Jay:** Yeah, well Lyme is... The CDC about five years ago said that 30,000 people a year are affected by it. Then in 2013, they said that 300,000 people in America are affected by Lyme. And there's experts that say that they're still 10x off. That it's even--

**Erin:** More.

**Dr. Jay:** Yeah, it's even more than that. The best way to say it, Erin, is that there's more people affected by Lyme each year than breast cancer.

**Erin:** That's a lot.

**Dr. Jay:** Yeah. And breast cancer gets a lot of attention. And Lyme doesn't quite get that attention.

**Erin:** Yeah. And I think you're right, too. When somebody hears Lyme, they might not even want to look in to it because it sounds scary. But if they do look—because I was trying to learn more about it before this, not knowing very much at all, when you just look out on the interwebs for Lyme disease, it's actually really confusing because you'll hear totally conflicting information. Like a lot of people just think it comes from tick bite. So if they don't live in an area where they have exposure to ticks, they might think, "No way I could ever have Lyme disease."

**Dr. Jay:** Yeah. Yeah. Well, in Lyme, Lyme is around the globe. It's around the United States. It's always known in the United States as like the Northeast and the Midwest. Lyme's been diagnosed in every single state in the U.S. So we know Lyme doesn't know borders. It does travel via birds and other things. And it is transmitted via tick. But it is other ways: spiders and rodents and mosquitos, sexual transmission, from mom to utero or baby, breastfeeding. There's a lot of different modes of transmission, which make it to be almost in epidemic proportions.

**Erin:** Mmhmm. Wow. So if someone's learning about this, and they maybe get discouraged because there's such a mix of information out there on the interweb—and Lyme seems to be a little more controversial topic than I would have thought it would be—do you have any perspective on how it became controversial and how somebody can dig through the weeds to find out what they need to know to get properly tested and then learn more about it if it turns out they do have it?

**Dr. Jay:** Yeah. Yeah. The best strategy is definitely education. Fear and maybe emotional actions happen when there's not really knowledge to back up what's going on. So just always learning more about it is a good thing. But Lyme disease, if Lyme is prevalent or present in somebody's body, the key isn't just to kill the bug.

The key is to focus on getting the body well, as a whole. And I think that fits in, no matter what your health struggles are, it's still identifying the source or sources to your health issues.

And I think it comes down to two things. I believe it comes down to these two things, Erin, is figure out what is the source or sources

of your health issues. And just like headaches and migraines, as to why are you having them? If somebody's on here and they're looking for the next remedy that's going to get rid of the headache when it appears, that's great. That's treating the symptom. And I think that's really important.

But you always want to look upstream and say, "What's the source? What's the source or sources?" And treat the symptoms so that life's more manageable. And I always prefer more of a natural way, but work on the symptom as you're moving upstream. And as long as you're moving upstream, then you can get your life back.

For Lyme, oftentimes there can be other things other than just the bacteria. Usually, when there's Lyme, there's other viruses, other bacteria or parasites, fungi or fungus that can be present in the body. And then, along with other things like maybe possible mold exposure, heavy metal toxins, poor dietary choices, lifestyle, emotional stresses, leaky gut, autoimmune issues.

And so Lyme, I believe Lyme gets taken out of context and says, "Lyme's a bug. Kill it with an antibiotic or kill it with that bug bomb." And if that was the only issue, then yeah, then maybe there's a reason for that. But what about all the other things going on with the body? And that's where looking at the body as a whole, holistically, I think is the best route for Lyme.

**Erin:** To strengthen the whole body, so it goes along with the other infections that we may have or parasites in a sense. Like, if there's things like this in our environment everywhere, but whether we're strong and can resist them—or I call it the weak host, so we have an environment where these things

can become overgrown or start affecting us—and that makes all the difference in how we feel.

**Dr. Jay:** Yeah, it's when the immune system is really suppressed or a lot of stress is going on. Yeah, these things can surface. And the key is just again looking at the body as a whole. But the number one tip I would say, especially for Lyme/just having headaches/migraines, thinking about, "Okay, well my wife, you know, would get headaches when the pressure changed." And we lived in Wisconsin at the time, which--

**Erin:** The weather.

**Dr. Jay:** Yeah, the weather can change a lot from all over the place. So you can have three seasons in a week. So the question to people, "Why would she get those?" And she got headaches and things other times, too. But it was really the pressure change that really killed her or seemed to really make her suffer. And I believe it's all about the drainage.

So the word detox gets used very often for everything. And I like to separate the word drainage versus detox. So detox I think of, okay, you're actually grabbing onto like chemicals or toxins out of the body and removing them. Drainage explained, it's more of just the normal pathways. Like your colon, if you're constipated, that's a drainage pathway blocked up. Your liver, gallbladder, bile flowing is a critical, critical drainage pathway—the kidneys, the lymphatic system. The skin, just even not sweating is a drainage pathway.

So if the body isn't draining properly, symptoms occur. Anytime you kill or anytime you detox, the stuff can't move.

For headaches in the migraine

area, that it's the drainage pathway from the brain or the head to the body. So I almost like to separate the lymphatics. So they've recently found in the last couple of years that there's actually lymphatic connection in the brain to the body. But I like to, for my purposes, thinking about this, I like to separate the head portion from the rest of the body.

So it's like okay, the head lymph, or what they call like the glymphatic system versus more of the lower lymph rest of the body. And you can move lymph really well. If you're not opening up that brain lymph channel to the body, that's when the pressure of the body can't adjust. And I believe that was a big issue for my wife was that drain or the...Such a tongue twister...

**Erin:** Made a difference. Yeah.

**David:** Yeah, the brain drainage was the big thing for her to get rid of her headaches.

**Erin:** So did she start doing lymphatic drainage massage? Or how else did she open up those drainage pathways for the head specifically?

**Dr. Jay:** Yeah. So as I've worked with clients learning more and more tools, for her it was a little rough because we were figuring things out as we went, what worked for her. Today now, though a couple of tips that I would give your listeners of the summit is getting enough sleep. And that, I get when you're not feeling good, that could be one of the tougher things.

But when you sleep is actually when the brain drains. So when you're awake, if you think about when you're awake, the glial cells in the brain start to swell up from inflammation. When you sleep, they start to drain. And that helps

with the head pressure, so trying to optimize sleep, super important.

There's herbs though and things that can cross the blood-brain barrier. There's essential oils that can do that, as well, to open that up. I'd say one of my favorite essential oils for brain drainage is Boswellia or frankincense is the name.

**Erin:** Oh, okay.

**Dr. Jay:** Yeah. Yeah, I always like to call it baby Jesus oil, but frankincense. Yeah. So you can literally put some on your temples, forehead, base of your skull behind where the top of the neck and the base of the skull meet. You just put like a drop and rub it in there. And frankincense helps to open up that brain-to-body channel.

There's a company called Nutramedix. They have an herb called pinella. That one works amazing for brain drainage. But I have to caution you. If you drain the brain, that's going to dump into the body lymph system. You want to make sure to give extra attention to that body lymph. There was an individual that just took pinella by itself. And they ended up with these huge swollen nodules because it cleared the brain. But then, it backed the body up. So I always like to pair pinella with burbur, same company Nutramedix. Burbur and pinella tend to be really great combinations for that drainage that can open that pathway up.

**Erin:** Those are amazing tips. Yeah, and really, I'm glad we talked about that because that's one of the main complaints I hear people say is that they get these pressure headaches when the thunderstorms come through or the weather changes or something like that. And they can't quite figure out what's going on. So these are really practical things

people can do to start feeling better, and it sounds like actually moving your health in the direction, too. It's not just covering up the symptoms, right.

**Dr. Jay:** Yeah, exactly. Again, if there's anything to think about when you're struggling with health issues, symptoms is always think, "What's the source? What's the source of this?" And that helps to lead you down the right pathway.

**Erin:** Do you have anything else along those lines of things people can do at home to help with the headache management or with the symptom management that's holistic?

**Dr. Jay:** Yeah. Yeah. Yeah. There's a good number of tips I would say. One of the things I learned back in my chiropractic schooling days that seems to work for a decent amount of people is acupressure points. So if you look at the thumb webbing of your thumb, and you pinch your thumb and pointer finger together, you'll feel, almost feel like a little marble or ball in there. And that's an acupuncture/acupressure point to relieve headaches. Now, the only contraindication of this is if you're pregnant, you don't want to do this because it will cause uterine contractions, unless you're like over term and you want to get the show moving forward in your labor.

But yeah, so pinching between the webbing. And what you're going to do, you're not going to do that Darth Vader death grip. You're going to apply some pressure. Find out where it's tender, that ball between the fingers. And then, just put some firm pressure and hold it. Typically, when you feel both hands, there'll be one that's more tender than the other. I would start with that one first. You can do though--

**Erin:** More tender.

**Dr. Jay:** Yeah, you can do both. The other thing I've seen with headaches, too, going back to when I had a chiropractic office, headaches and relief of the neck area was a really big area. So any misalignments basically in the neck can essentially cut off the connection from the brain to the body. And essentially, spinal adjustments are just realigning and getting things flowing.

But they've also shown, with chiropractic adjustments like adjusting the...Essentially, if you think about it, shifting the bones slightly back into place, that it actually helps to not only improve the nerve function, which is what the body uses to run the show—the brain communicates to the body through the nerves—but it actually instantly changes the blood flow. And headaches and migraines, they link with a constriction of the blood flow.

So even fixing the alignment in the cervical spine, the neck, can be a big factor. Typically, headaches I would say is the C1, C2, like the top two bones. But when you look at somebody from the side, you should have a C-shape, forward C-shape curve. And if you've lost the curve or reverse curve, that's going to put a ton of pressure up there. And just working on restructuring the neck can be a big help.

**Erin:** Did you find when you were practicing chiropractic that people would come in with headaches or migraines and have to come in like once a month just to prevent them, and never really were able to hold the adjustment. I ask that because that was my experience. It helped me so much. It really would help ward off having more headaches and things like that. But I found like if I passed that three-and-a-half week, four-week mark that they would all start to come back. So I kept having to go in and go in until

I looked into like heavy metals and digestive issues and things like that.

**Dr. Jay:** Yeah. Yeah. You just said it right there. Somebody, that they're really struggling, they could literally get adjusted every day. And it would help them. But they're going to need to keep doing it because there's other issues going on, other stressors. When you've identified all the source or sources to your health issues, and when you get adjustments, the adjustments hold so much longer because you're not basically doing something to shift it out. There's not that source.

So if somebody's having to go in and get adjusted every week or every day, it's just such a bad case, there's a time and a place for that. But you always want to think about, "What are the other pieces to this puzzle?" And that's really something I found being in the chiropractic profession. I'd see people that gained their hearing back. Headaches gone. I'd say that's an easier thing in the chiropractic world. But people gaining their hearing back. And then, other people are like, "I don't notice anything." And it's like, "Wait a minute." This is definitely a piece I think of the puzzle for a good amount of people. But we have to look at all the pieces. Like you said toxicity.

Lyme disease fits in the pathogen world and relating Lyme disease to the headache. So in the headache world, I feel as if the cardiovascular or the restriction in blood flow plays a big role with headaches and what we believe can cause it. Well, Lyme disease causes what they call a hypercoagulation, where it means that the blood starts coagulating together. And it doesn't flow, as well. Well, think about that. Pathogens cause hypercoagulation meaning the blood flow doesn't go as well. Headaches have a lack of blood flow. So I believe that

there can be a connection even because of the hypercoagulation of pathogens like Lyme and other bugs causing that, too.

**Erin:** So there could be other bacterial infections or like the parasites, too, that are putting off toxins?

**Dr. Jay:** Yeah. Yeah. Yeah, viruses, parasites, bacteria, these different stressors can cause coagulation of the blood. Even EMFs—electromagnetic field—or what's technically called EMRs now, electromagnetic radiation from like Wi-Fi and Bluetooth, they can also change. Cell phones right to your head can change the coagulation of blood. So there's many things that can do it. But pathogens are definitely one of those categories.

**Erin:** Okay. So definitely something we need to take a look at. If somebody's feeling overwhelmed with all of these different root causes, they just feel like there's too much to look at, they don't even want to start, what do you tell them?

**Dr. Jay:** Yeah, well, that is the million-dollar question now because we're in an information age. Well, I should say an over-information age. You start going down a rabbit hole. And you're like, "Oh, my gosh! Now, I learned all this stuff. I've learned these 40 supplements that are good for headaches." It's like where do you begin? This is where it's I always love people learning, especially for their own condition and what's going on.

But there's also the boundary of like you get lost in your emotion and can start thinking, "It's definitely got to be this." And then, maybe get a little tunnel vision and not see other things, so having like a family member or a friend or a health coach, I think having like a practitioner or health coach or

somebody to help in this journey, depending on how bad your health is, is always a good thing to do.

But you want to just focus on, “Okay, what’s the source or sources to my health issues?” And let’s say it’s Lyme disease. Let’s say it’s heavy metal toxicity. Let’s say it’s mold. Whatever those things are. Then, the question begins. “Okay, so if those are the source or sources to my health issue, then where do I need to start? What do I need to start doing today that’s going to get me closer to fixing that?”

And so focusing on the big picture of the source or sources. And then also, too, it’s like okay, well, if Lyme disease or mercury toxicity in the brain, because mercury loves the brain. Aluminum loves the brain, which is again could be headache triggers—but if heavy metals are the thing that you have to detox, great. But what can you do today to help manage that migraine or that headache so that you don’t have to go home from work at lunchtime because you can’t function?

So I always like to go symptom plus source. Yep. Yep. And just think of it from that way because otherwise when you start digging in and researching and reading, you’re like...It’s almost like the paralysis by analysis. But it’s almost like the paralysis by over information. Like, “I just don’t know what to do.”

**Erin:** Absolutely. But yeah, so you have to start somewhere. But keep looking, too, because you want to know like the root cause of your Lyme. I’m an engineer by background so we always do root cause. One of the steps that we do in root-cause analysis is asking “why” five times. They call it the five whys. So you might be affected by Candida. But Candida’s never like a standalone issue.

So you have to ask, “Well, you know, why am I having this? Where is it coming from?” And keep digging it deeper and maybe charting it out or something like that just to prevent overwhelm but don’t give up at the first thing you find. Or just don’t go spend all of your energy chasing the first thing that you find because if you don’t look at the other factors, it’s hard to heal just from that one thing. Like Candida, for example, people will put this big effort towards overcoming that. And if you don’t look at maybe infections behind that or parasites or heavy metals behind that, they’ll never get better from the Candida itself because it’s just more of a symptom of a deeper problem.

**Dr. Jay:** Absolutely. Yeah, and I would agree with you on the candida. The heavy metals, huge link with that. And also, bacteria, fungus, parasites, they all work in synergy. Usually when there’s Lyme disease, there’s other bugs. When there’s candida, there’s other things to it. And yeah, you can minimize the symptom, but always getting to the source, like you said, is important. So keep asking that “why?” I love that. And the engineer brain, so we can start talking about the neck curve and the 42.23 per ounce. I’m just teasing.

**Erin:** Absolutely. Well, something nerdy I did want to get into because I know you work with people on genomics more and more now. And that’s like one of these sublevel root causes because if you can pinpoint an issue that’s off there, it can make a huge difference in recovering. So can you just like to kick that off tell us a little bit the difference between genetics and genomics? And why this is an exciting place to start investigating?

**Dr. Jay:** Yeah, yeah, I love this area because I personally believe that this is the future. And things are advancing so fast that I don’t even think I’m grasping it, let alone where

things are going to be in 12 to 18 months. The amount of technology advancement is insane. By the end of this year, there should be available a full genome analysis for maybe 100 bucks. And right now, like the 23andMe is very popular. As of right now, when we’re doing this recording, they’re on version 4, chip 4 basically. And they’re looking at about 635,000 different pieces of DNA information. Well, that right there is like 635,000.

**Erin:** Talk about information overload.

**Dr. Jay:** Yeah, well a full genome is going to be in the millions, like maybe 50 million or something crazy. So it’s going to be exponential. But things are changing so fast. And I believe the future, especially of like natural healthcare, functional medicine, is looking at the genetics or genomics from more of a lifestyle basis. I like to steer away from what I would consider more disease genetics or genomics, and focus more on lifestyle.

Like disease genetics or genomics, for instance, would be like, “Oh, you have a six-time increased risk of uterine cancer because you have this gene SNP. Or you’re three times more likely to even have a headache.” And I, from a clinical side, I’m like I’m almost freaked out by knowing that. And I don’t—

**Erin:** Yeah, a lot of people are as patients, too. They don’t want to think about that.

**Dr. Jay:** Yeah. So from a practitioner standpoint, I love looking at it from more of a lifestyle, and saying, “Okay, Erin, based on your genetics, what amount of carbohydrates would actually be beneficial for you?” Because there’s diets all over the place. Every year, there’s *New York Times*’ bestsellers from raw vegan to ketogenic to everything in between. And looking at your own

personalized genetics like what carbs, protein intake, fats? Are you somebody that really is genetically privileged to have a lot of fats? And what type of fats? There's different kinds of fats. So even being able to personalize...So I'll come back to your original question here, too.

So if I take a big picture, look, I say—okay, when I'm working with a client, I'm looking at, "Okay, what's the source or sources to your health issue?" And then, also want to look at the genetics or the genomics, which is genetics essentially is more of looking like single gene and that's just the single gene.

Genomics is technically a more correct word to use. It's not quite as familiar. So I'll often interchange them. I know that's not proper. But genomics is more of looking at the gene and how it interacts and affects the body as a whole. So it's a little bit more of a holistic approach I guess using the genomic word. But I oftentimes use genetics just so people aren't like, "What's genomic?"

But so when I'm working with a client or looking, "Okay, you've been struggling with health issues for 12 years. You know, like you can't even get out of bed. And you know everything is stressed out because your health is stressed out—relationship, job, all of that stuff." I love to look at, right now, in this circumstance, this environment, what's going on because environment trumps everything.

But I also love to look at, "Okay, let's look at your blueprint. Your individual blueprint of what God gave you. Or what you were born with from mom and dad, and say, "Okay, well based on your genetics or your genomics, what are the foods? What's your sugar

addiction? What's your insulin blood sugar level tendencies?"

And it's almost like merging them. So looking at environment and then looking at genomics or genetics. And I really believe that genetics can give us a look in to the future and say, "Okay, in five or 10 years, [inaudible] now following dietary guidelines like this for you is really going to be great." But that environmental factor, like if somebody's really adrenal fatigued, and let's say that super-low carb and ketogenic is great for them, well, it might not be right at that moment because their body doesn't have the resiliency to transition or keto-adapt. So there's got to be a little bit of a mending from environmental or current versus genetic. I believe they both have a place. But it's like a practitioner blending.

**Erin:** Blending. Yeah, so you have to look at what somebody's going through. What they might need to heal the situation they're in right now in addition to what they're genetically set up to need. And if you look at the genetics or a specific pattern, how can this be helpful with somebody who has headaches and migraines? Or do you say it's just helping them cut through a trial and error on their way to finding what's working for them?

**Dr. Jay:** Yeah. Well, genetics really gives you a blueprint for you. So nobody is the same. That's why I believe there can be 10 *New York Times'* bestselling diets. And they can all be different because they can work for different people. So it's a way that you can quickly understand the body.

**Erin:** [Inaudible].

**Dr. Jay:** Yep. And what I've found when I'm doing genetic analysis or genomic analysis and my docs

are doing it with clients, it's like we have a tendency to eat that way. Or we have a tendency to do what our genes are even saying. But there's not always the best understanding of why you're doing it. And the genetics/genomics, looking at your genes, helps to solidify like, "Yeah, there's a reason every time I have coffee, I feel like agitated or anxiety," because there's a gene that you can be prone to anxiety or agitation from that. So understanding our genetics helps us walk more in our own individual blueprint, which from a dietary standpoint can help say maybe you're not the best...

Like for myself, I don't do great with what they call PUFA fats. It's polyunsaturated fatty acids. And there's bad PUFAs everybody should stay away from like soy bean oil, canola oil, corn oil, the rancid oils. But there's good PUFAs like nuts and seeds. And my body just, from a genetic standpoint, less than 6% PUFA. Well, I used to eat a lot of nuts and seeds, a lot of gut disturbances. And cutting that out, it's like, "Oh, I feel better." So it helps to really guide you for your individual body.

**Erin:** Mmhmm. So it sounds like things that people might notice or know intuitively, but they don't always listen to because they don't understand that it's actually wired in them to be that way. So once you know that's right for you, then you can just move forward in your life and feel better and confident that you're doing the right thing. That you're not missing out when everybody else is publishing articles about, "Oh, you should eat more walnuts and almonds to be healthy." You can say, "Okay, that's not my path."

**Dr. Jay:** Yes. Yeah. Yeah. And the genetic/genomic world, like I said it's the Wild, Wild West right now. And just trying to keep up with the information coming out is a full-

time job by itself. So it's always good just to find somebody that can sift through it because it's like a foreign language. And you're like the prone to anxiety, agitation, it's called the ADRA2A gene. That one's not bad. And then, there's some sleep ones like timeless and some other names, BDNF, that are maybe more... But some other ones that are like CY, 1P, 2A. You're like, "What, what the heck is this stuff, so?"

But the genetic world, we can look at somebody's exercise. So is somebody better with more of like endurance, slow and long exercise? Are they better with more like high-intensity sprinting? Are they better more—like, if weight's an issue, for instance—are they better more with a mix of exercise or yoga?

And we can look at genes and try to understand the body better that way. We can look at detox pathways: phase 1, phase 2. And phase 1 involves like estrogen metabolism. And hormonal disruptions, Erin, I would say is a big factor, too, for headaches and migraines.

**Erin:** Absolutely.

**Dr. Jay:** And usually, there's always a source of why there's hormone issues, whether it's a pathogen issue, heavy metal toxicity, what not. There's always usually sources of why it's going on. But you can also look at the genetics for your detox pathways and hormones. You can also look at nutrition. Like, I was mentioning earlier, you can look at sleep. And are you more of a late-night owl? Are you more of an early-to-bed, early-to-rise type of person? How well do you sleep? Do you get sleep disturbed very easy? And the more you understand about your body, the more you can set your life up to try to—I don't want to say it's a game, but win the

game—optimize. Maybe it's better to say optimize you.

And then, we could also even look at supplementation. So vitamin D gets talked about a lot with everything. And the vitamin D pathways got maybe nine genes in the whole pathway. How you absorb sunlight and convert it to vitamin D. My wife, horrible at converting sunshine to vitamin D. I'm amazing. I'm like, I wouldn't have known that without looking at genes. So even though, we live in—

**Erin:** Is there something you can do other than taking more supplemental vitamin D to like support the mechanism of absorption or production? Or is the answer just to take vitamin D?

**Dr. Jay:** Yeah. Well, so, primarily, we get vitamin D, either through sunshine that converts to vitamin D, or we get it through our diet, which you get some in food. But it's primarily more supplementation. If somebody's a really bad sunshine converter to vitamin D, that pretty much guarantees you're going to need some form of supplementation to--

**Erin:** Ongoing.

**Dr. Jay:** Yeah, to have that level. But you can literally look at the pathway and say, "Whether, it's from sunshine or from diet—how do activate that in the liver, the first step? How do you transform 25(OH), which is usually that blood test they run into the active form called 1,25(OH)? How do you break down?" There are some people that don't break it down well. And they can actually get toxic of vitamin D very easy because they don't break down the active form.

We can look at how you respond to vitamin D. Can look at, there's a cool gene called the klotho. And it's a longevity gene. It's involved

in vitamin D, as well, too. So there's a lot of pieces. But inevitably, you always want to just focus on what's important for me to know. And then, what do I need to do today? Have a big picture in mind. But what can I do today to start moving me toward that direction? Because it can be overwhelming very easily.

**Erin:** Yeah. Sure. Definitely. I think that's a great example though of why looking at these genes can be really valuable though versus just taking things because you read about it or you tested low or something like that without ever investigating like why you're low.

I think B vitamins are another example that come into play for people with migraines a lot. They get recommended to take various B vitamins. But you would need to look at or you could look at your genetics to see which form is the best or where that deficiency is coming from. Can you talk a little bit about what could go wrong there?

**Dr. Jay:** Yeah. Yeah. Yeah. So the big one in that category is B12. And that one will get recommended, especially in the headache category, quite often. And there's different genes. There's B12 absorption genes. Just like how do you absorb them. They call them the FUT2 genes. They have some relation to gut bacteria, too, because it's like gut absorption or B12 absorption through the gut. There's the recycling pathway of B12. MTR and MTRR is the pathway for recycling B12. So if you're a bad absorber, if you're a bad recycler, you can pretty much guarantee you're going to need more than somebody that's not. Just based on the genetics.

But from the B12, there's different forms of B12. There's methylcobalamin. So if you just remember, it's always

something and cobalamin, so methylcobalamin, hydroxycobalamin, cyanocobalamin. And most people will throw cyanocobalamin under the bus. And I think, I mean your body has to convert cyanocobalamin into more of an active form. So I can see that. Some people say, "Oh, it's producing cyanide in your body." I would not say that.

But you can literally look at your genetics and see are you best with hydroxycobalamin, methylcobalamin, cyanocobalamin? Maybe, a combination of two. Maybe a combination of three of them.

And just again, it's about trying to understand your body better. The less you rock the boat, the less you disrupt the ship that you're on, the less symptoms you're going to get. The better you're going to feel. So it's very easy that even just a supplement you're taking could be something that's disrupting your equilibrium. And then all of a sudden, if headaches are a tendency for you, any time the body gets stressed, then that's where it's going to surface. And it might not be always the first thing we assume it is. And it could be even the form of vitamin, like you said.

**Erin:** Mmhmm. Like just looking into that or changing it out could have a big impact. Do you--

**Dr. Jay:** Yeah. And if you...Not to cut you off, but I will for a second. If you think about three main things, right—let's simplify the complex here. If you can stop the supplements that you don't need or get off the stuff that's maybe got really bad ingredients in it that your body's reacting to, if you can figure out what you do need, and then you can stay away from the foods that are upsetting you, whether it's caffeine or maybe you

react to oats, or gluten, or dairy, or egg whites, if you can figure out what the foods are you react to, stay away from those. If you can remove the supplements that are causing issues that your body's actually reacting to and if you can take the stuff you need, those three things can literally transform people's lives.

**Erin:** Mmhmm, nice and simple. Do you believe that really anybody can heal their body and get rid of headaches? So after listening to all of these different sources, they should have some good ideas. But is it possible for pretty much anybody that puts their mind to it to get over their headaches?

**Dr. Jay:** I believe—I'm a Christian—and one of the things I always think of saying-wise is, "God doesn't make junk." Meaning that if we can identify what's in...And he doesn't make junk. And God also needs no help. But he needs no interference. So what's interfering with the body's ability to heal? And no matter where you're at in spiritual, it's the idea that the body can self- heal. The key is to remove the source. If you remove the source, the body can absolutely heal.

Now, if somebody's been knocked down and out for maybe 20, 30, 40 years, they've had health issues, their resiliency, their ability to bounce back is not going to be as quick or fast typically as somebody where it's just happening. So the faster you can figure out these pieces to the puzzle and address them, usually the better the body will be resiliency.

But even if you've been knocked down and out for many years, the body can absolutely heal, as long as you identify what's interfering with the body's ability to work in the first place. And you might be because of maybe your journey, and the things that you've had, and the traumas, and the length of time, you might be a little bit more susceptible to getting

symptoms more than somebody else. And that's fine. That is what it is. But as long as you focus on removing the source, I absolutely believe there's hope.

My wife with the headaches, she can never tell you when it's going to rain. And, of course, people would say, "Well, you live in San Diego." Well, it's been really, really rainy over this whole winter or season in spring. And she has no headache. There's no headache. And it was all about getting to the source.

And then, all of sudden, when that was removed, that symptom of what she was experiencing—migraine headache and having to lay down—was gone.

**Erin:** Mmm hmm. Yeah, so it's not an overnight thing for everybody. It's not always a quick solution of tweak this in your diet or take this supplement. But eventually looking at different root causes and starting to put that puzzle together, there is hope.

**Dr. Jay:** Absolutely. Yeah, we all want the quick fix. We all want the magic pill. In reality, it's usually a combination of figuring out what are those missing pieces and doing them in synergy that gets people over the hump.

**Erin:** Mmhmm. Cool. Well, we talked about a lot of different things today. So to recap and guide our listeners in the right direction, I know the Chronic Lyme Summit is an amazing resource. We really talked about like why somebody might want to consider it and when they might want to consider it.

But if they wanted to know more about what to do about it or how to get tested and all that, you have this wealth of podcasts and articles on your website,

DrJayDavidson.com, and this Chronic Lyme Summit. Is there anything else you'd direct them to for that?

**Dr. Jay:** Yeah, the best resource is probably just my website, DrJayDavidson.com. It's D-R for doctor. And then Jay Davidson like Harley. Just unfortunately no relationship to the motorcycle company. But that's got links to our Lyme Summit, number one. Number two, it's got links to the Detox Project, talking about detoxification. But we've got some free resources on there, as well, too. The best place to start, because again this can seem overwhelming, the best way to eat an elephant—not that we're going to eat one—but the idea, it's big for fixing our health, is just

one bite at a time. So just starting to understand more of what the body's going through. Tools.

I really love...I wrote a book a couple of years ago. It's called *5 Steps to Restoring Health Protocol*. I think that's a great resource. It was a little selfish when I wrote it because I just wanted to brain dump everything and all this research I'd compiled. Instead of having stacks, it was like turn into a book. But it's really just about trying to simplify the complex idea of all the things going on and how do you work through it. And if you're not a reader, I recorded the audio book, as well, on Audible. So you can always listen to that. I think those are great resources.

**Erin:** Those are really great. And I encourage people to check out your podcast, too, because I think you do a great job of explaining things like coffee enemas that nobody wants to talk about or Lyme disease from start to A to Z really in detail. So if they got their curiosity peaked here and they want to learn more, I think that's a great resource for people. So thank you so much for being here and sharing with us.

For all of our listeners out there, I hope you get the chance to tune in and learn from more great speakers during the summit. Again, my name is Erin Knight. And I will see you next time!



# Dangers and Mistakes Made with Probiotics

Wendy Myers, FDN-P, NC, CHHC with Jay Davidson DC, PScD

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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.*

**Wendy:** Hello, everyone. I'm Wendy Myers, here from Liveto110.com. Thank you so much for joining us again on the summit.

Anyone determined to be healthy takes supplements. So I wanted to bring together all these experts for our summit to help you make the right supplement choices. And I love supplements myself, and I'm really passionate about helping other people make those little distinctions and make supplement recommendations on this summit so that you can make the right choices for you and experience the health that you deserve.

So, today, we're going to be talking to Dr. Jay Davidson about probiotics. Dr. Jay Davidson is a doctor focusing on a natural functional medicine approach. He's a popular speaker, number one international best-selling author. He's a husband, a father, a former radio talk show host, and church elder.

Dr. Jay was the host of the Chronic Lyme Disease Summit with 33 experts that happened in April 2016. And he's also the co-host of the upcoming Detox Project, which starts September 26, 2016, just a few weeks after this summit. Highly, highly recommend that you tune into that. Dr. Jay Davidson is admired for his ability to bridge the gap between the scientific

health community and the lay person. Dr. Davidson, thank you so much for joining us on the summit.

**Dr. Davidson:** Thanks for having me, Wendy. I'm so excited for this summit.

**Wendy:** So probiotics, very, very important part of any supplementation protocol. A lot of people have bacterial dysbiosis in their gut, have leaky gut, a lot of health issues related to their gut.

So let's talk first, just lay some ground work, why don't you explain where bacteria are in the body?

**Dr. Davidson:** Yeah. So probiotic is really referring to, basically, bacteria in a capsule. So when you're asking about where is the bacteria in the body, most of it is in the digestive tract and most of that's actually in the large intestine or the colon portion. But there is bacteria all over our body.

So, I remember I was at a seminar a few years ago, and it was on the microbiome and the bacteria. And they literally took swabs from people behind the ear, under the arm, somebody's stomach, their leg. And they basically cultured all these different Petri dishes of these swabs, and it was amazing the type of bacteria that grew. And it really conveyed how different the microbiome or the bacteria are in your mouth versus your digestive

tract versus behind your ear.

So bacteria, I mean, they're basically all over our body. But the main bacteria, I guess, probably we'd want to focus on is really the digestive tract.

So when you're eating food, you chew food. Food starts to basically digest in your mouth, you have enzymes like amylase that will break foods down. You swallow that and goes down the esophagus, into the stomach, which has classically been known to be too acidic for any bugs. But in all reality, there's bugs in your stomach as well too. And then the food goes into the small intestine and then to the large intestine.

Now, most of the bacteria, as far as the amount, should be in the large intestine, the colon. And specifically, more like the first two-thirds. So I think that's probably giving a good overview of where the bacteria are in the body.

**Wendy:** What function do these bacteria perform in our body and in our health?

**Dr. Davidson:** The bugs do really amazing things. And good bugs will compete for unhealthy bacteria as food, so it will help to keep the bad bugs away. Good bugs will actually produce antibacterial substances. They can help to

actually manufacture vitamins. I mean, bacteria literally can help to manufacture all kinds of different B vitamins, so like B1, B2, B3, B5, B6, even B12, which is popular in the methylation world, vitamin A, vitamin K.

So the bugs can make vitamins. They can actually extract minerals from our food. They can actually help to produce essential fatty acids. They'll stimulate cell repair. They can eat excess sugar. They can also combat allergies, inflammation. And even one of the things that I know, this is an interest in your world as well too, is they can now actually help to transform toxic metals into chemicals that are more useful for the body.

**Wendy:** Wow, yeah. And really, really compelling how important it is to have healthy gut flora and probiotics and taking probiotics, really essential for a lot of people to help replenish good gut bacteria and keep that good balance between the good and the bad and the ugly.

So what are some of the common mistakes that people make when taking probiotics?

**Dr. Davidson:** Common mistakes people make taking probiotics, I would say, from a clinical standpoint, it's taking the same probiotic over and over again. I think that's probably one of the biggest mistakes that I see people make. And it's the whole idea—at least from my clinical perspective—I feel like when we take probiotics or we take things with bacteria in it, we want to rotate.

Because if you are to take a supplement and it has maybe eight strains, 10, 12, 15, and you consume that probiotic for multiple years, there're so many different kinds of bacteria that we're discovering and finding out about and, basically, that

exist that you could potentially over-compete for other good bacteria if you over consume too much of one kind. Does that make sense?

**Wendy:** Yeah.

**Dr. Davidson:** And so, I think, probably one of the most common mistakes I see in the probiotic world is definitely taking the same one over and over again. And it usually starts in the fact that individuals started taking in probiotic, and all of a sudden they notice, "Oh, my gut is feeling better. I'm doing better." And then they remember that, and so they use that as a motivation to continue, which I always love that motivation. But in the bacteria world, you definitely want to think about variety.

And I would say maybe another, if you want to say mistake, in the probiotic world is limiting your bacteria just to supplements. And I love supplements. I know this is a supplement summit, but you also want to think about getting even good bacteria from our food or there's even a thing called fecal matter transplant, which the FDA now is regulating that in the States. But it's basically getting unique bacteria from other humans that you can't get in a pill or even in a food.

I think in the probiotic, the bug world, I love supplementation, but love the idea of rotating. In the food world, one thing I've seen, Wendy, and maybe you've seen this as well too is kombucha. Have you ever made kombucha before?

**Wendy:** I have not made it. I have not been so brave.

**Dr. Davidson:** So it's a little strange trying to understand the concept, but like once you make it, it's very easy to make Kombucha. And it's almost like it makes too much of

it. And I've found that those that make kombucha, it seems like they over consume it, because there's only certain bacteria that are in the kombucha. And so if you're one of those people that make Kombucha, definitely ferment it a long time, so the sugar content goes way down so it's more vinegary.

But I also like finding friends that have—they call them SCOBYS, which is basically where the bacteria are growing, it's like a symbiotic colony of bacteria, they call a SCOBY. And maybe taking half of your SCOBY and giving it to somebody else and getting a half from them, so you're like trying to vary up the bacteria. Or maybe just don't drink eight cups of Kombucha at a time every day. So I think just variety is definitely the solution for everything with bacteria and probiotics.

**Wendy:** Yeah, I've had vegetable fermenting parties. Because you just get a lot of jars and friends and help cutting up all the vegetables can be very labor intensive and that's a great way to make fermented vegetables and get your probiotics.

So let's talk a little bit about how powerful are probiotics?

**Dr. Davidson:** Well, they're very powerful. I mean, when you look in the research, and I'm sure people have heard this before, that classically we're more bacterial cells than human cells. The number quoted, oftentimes, is we have about 10 times the amount of bacteria in our body than human cells. So if you take a step back and say our body's made of probably about 50 to maybe 100 trillion cells. I've always heard from some of the research back that I've read, 76 trillion cells for a human being. And I always thought, "Who had to count that?" to figure that out.

But in that, 10 times the amount

of cells we have are more bacteria than human. But there's actually some recent research out just this year, early 2016, that showed that it's more of a ratio of like 1.3 bacterial cells to 1 ratio of human cells. So it's pretty close to actually bacteria to human cells.

And what I thought was interesting about this study, getting maybe a little off the topic but, before you poop, before you go number two, which is always something everybody loves to talk about, but before you go number two, you're actually more bacteria than human cells. But after you go number two, after you poop, you're actually more human cells than bacteria, because you lose so much bacteria.

And this is new research, again, early this year, trying to quantify more that we're almost at equal relationship between bacteria and human. And the bacteria really have a big effect, and I probably could've mentioned this earlier when you're asking about what effect the bacteria has. But the bacteria have a really big effect even on triggering genetics.

So when the genome project was happening, and it finished in 2003 or 2004, whenever that was. And they thought they would map out every disease and where it came from and why. And then they figured out we have the same amount of genetics that even like a mouse has and trying to figure out, "Well, how can this be?"

And then the whole topic of epigenetics came up, the expression above the gene. And realizing that, actually, our bugs, our bacteria, trigger genes. So a certain person that's maybe overweight, obese, versus maybe a thinner, skinnier person, that obese person is going to be missing certain bugs that that skinnier person has. So the bugs actually affect our genes' expression. So it's not necessarily

our blueprint we are given, but the expression. And what's interesting is the bacteria or bugs in our body actually make that up. So I think bugs are superpowerful.

Another case I think about, I was at a lab of, basically, a biochemist, a scientist that was taking bacteria and he was growing Streptococcus, staph, MRSA, which is, obviously, the multi-resistant staph from antibiotics, basically. And so some tough bacterial infection type things: strep, staph and MRSA. And he's growing them on agar plates. And colonies were growing great.

And what he did is he actually took, specifically, this one brand—he actually developed the probiotics. So, obviously, he was probably a little biased with it. But he took the brand of probiotic, opened the capsule up, and smeared it on top of the cap of the agar plate. Set it on top of the agar or put it back on so the probiotic was actually not touching the strep, the staph, or the MRSA, but was obviously in the same container. And what you saw over a couple of days was that the whole colony, basically, disappeared: the strep, the staph, the MRSA.

Now, what's interesting about this is he took the cover off that had the probiotic on the cover and then put a clean cover back on and then the strep, the staph, the MRSA regrew again. And when I heard this, it really, really enforced the idea that we don't want to really kill the bugs as much as, Wendy, we've got to make sure we have the right bugs in our system. So I really think probiotics and bacteria in the body play just a massive role with our health.

**Wendy:** Yes. And I just thought of another common mistake that people make with probiotics and purchasing probiotic supplements is the importance of a clinically proven

strain of probiotics. And dealing with my client population, I urge people to look at the number basis, acidophilus or bifidus, and there can be a number next to that, which shows that it's a clinically proven strain. Can you talk a little about that?

**Dr. Davidson:** Yeah. I think, definitely – so I will say, I've got some, obviously, preferences of different products that I've found to be effective clinically, but also I feel like there's research behind them as well too. It seems like a lot of these supplements that are sold, especially on the store shelves, contain a lot of the same bacteria. And it's maybe eight, 10, 12, 15, and it just maybe varies one or two bacteria among a lot of popular probiotics or a lot of them that are available on the shelf. So thinking about the idea of rotating, it's not about rotating the brand, but like you said, to literally look at the strains.

And so there are certain strains of bacteria that are amazing at the female reproductive tract, but they don't seem to be very beneficial for any other things. So there's different bacteria, actually, for our mouth and our microbiome. The kind of the big thing I would say, in the last couple of years, is people trying to brush their teeth with probiotics. And I love the idea of that, but the bacteria in your mouth is different than the bacteria in the digestive tract. So it's not quite as straightforward to just brush with a probiotic or brush with bacteria.

But, right now, there's a thing called the human microbiome project that's happening and they're trying to identify all the bugs. It's obviously an intense process. And every day, every week, every month it's like, "Oh we found this bug that did this and we just named it this." And so I feel like right now, Wendy, we're just on this cutting edge where

everything is going to be changing and flooding forward as far as information. And I think the tools we'll have, even in five or 10 years, in the bacteria digestive tract type category and even the testing is going to be just phenomenally much better than we have today. But thinking about today, definitely doing some research on different strains, what it's been shown to be effective for different areas. There are certain bacteria that are like the small intestine versus the large intestine.

Bacteria, actually, for those chocolate lovers out there, the only reason that your body can actually breakdown cacao is really the bifidal bacteria that's in your colon that can actually turn those compounds of cacao into those anti-inflammatory compounds.

So bugs are just a really exciting, fun category that I love to talk about. But I feel like in five or 10 years, our knowledge base is going to be just exponential of even what it is now. But what we know is so much more advanced than even what we knew five or 10 years ago.

**Wendy:** Well, I have to say, I definitely have a robust bifidus colony to break down all the cacao that I eat, for sure. So you talk about testing, are there any good tests right now that can test your gut and microbiome and guide supplementation of probiotics?

**Dr. Davidson:** That's a great question. Clinically, right now, I've experimented with some. I haven't necessarily found one that is like, "Boom, that's the one to do." And I feel like it's going to keep changing and even evolving better in our knowledge base. But, I mean, there're definitely companies like the uBiome. There's a lot of companies that, like the name "biome", "something- biome"

because the microbiome has really got kind of name.

But there's different companies that are tracking, they're asking people to send in their donation of bacteria so that they can analyze it. There's also ones like uBiome that actually try to interpret what kinds of bugs you have in your system to try to better understand it.

But there's other companies like Doctor's Data that have a pretty good stool analysis. Genova has a pretty good stool analysis, but I don't use a lot of those right now. And to be honest with you, I feel like we're too infancy of a stage to fully know what all the strains are that we have or what we're missing and how to fix that.

That's kind of my clinical opinion. I don't know. What do you feel from what you know right now?

**Wendy:** Yeah. I think it's still in its infancy and I just, basically, tell clients to take a broad-spectrum probiotic that kind of covers our bases and change them up, like you said, because there's 400-500 bacteria in our gut that- there's probably more that we don't know about. But, yeah, you want to change things up for sure. But what are your favorite probiotics that you recommend to clients?

**Dr. Davidson:** So the story I was telling you about, the agar plates, that supplement comes from a brand called Systemic Formulas and the supplement is called MBC.

So like man, boy, Charlie, MBC, and those strains I know clinically proven to do stuff and, of course, that whole idea of what happened, I think really proves it too, but I love MBC. I like that especially after somebody has been on antibiotics. Because when you take antibiotics, it wipes out good and bad bacteria and commensal kind

of in between bugs, but it doesn't take them all out.

So there's about 15% of bugs that don't get killed off, those become resistant to antibiotics and those tend to repopulate faster than the good ones do. So any time somebody takes an antibiotic and that's definitely never a first choice of mine, even in the Lyme world, that's not something that I would really recommend. Of course, it's there for an emergency, but the vast majority of people that use antibiotics or are given it is really not necessary.

But if you take an antibiotic, you definitely want to repopulate bacteria and the good stuff as much as possible and fast. And the MBC from Systemic Formulas, it's made on the capsule or on the label, it says 50 million for a colony in a capsule, basically, or 15 million CFU's. It's made actually with 100, that way if it sits on a shelf for a year or two, it will have over 50 million. And I know personally they actually let it sit on the shelf for over four years and it still had over that. So it's got quite the resiliency of it. So I love that, especially after antibiotics, to kind of re-colonize because it's really potent and really strong.

But a couple of my other favorites, I really like the brand Original Medicine, and that was one that was originally started by Jordan Rubin. He's the guy that wrote *The Maker's Diet* book, great guy, he wrote the forward to my book. His story is amazing though. And I mean, he's had so many stories in his lifetime.

But kind of his first health story was that he was on death's door-stop, Crohn's disease, went just from being a very strong young guy to just being like rail thin, just over 100 pounds on his death bed going to every doctor. And it wasn't until,

basically, he started eating more natural foods and consuming these soil-based organisms, soil-based probiotics, when it changed his life. And so I knew about that years ago. I've always seen good results with it. So the Original Medicine Multi-probiotic was really based off of that. I love that brand.

And then a newer one in the last couple of years too that I like, it's from a company called Ancient Minerals and the probiotic is Prescript Assist. And that's also soil-based organisms, but they're different strains. And I'm curious to see what your favorites are too. But when I look at those three, they all have different strains in them. So I like to kind of tell people to take a bottle and then when you're out of that bottle, don't get the same thing, take a different – rotate, switch bacteria.

And you could even do it more often than that, but just kind basic guidelines, let's not just consume the same bacteria or probiotics forever, because potentially that cause dysbiosis and out-compete other good ones if you outnumber, if you put too much of one kind in.

**Wendy:** Yeah. I love the Prescript Assist. There's also one called VSL, that's really, really nice. I love Dr. O'Hara's Extra Strength. And another one called HLC by Pharmax, HLC Intensive by Pharmax, all clinically proven strains, really, really nice probiotic.

**Dr. Davidson:** So let turn the tables on you a little bit here, what do you – because I did a summit too and I've got another one coming up too, so I understand and asks questions. What do you like to do as far as rotation of probiotics and recommendations? I mean, what have you found clinical that's been of benefit for your clients?

**Wendy:** Well, just exactly

what you recommended with switching the bottle every time. And once you finish the bottle, to try a new brand. So I recommend—there's about five or six probiotics that I mention that I tend to have clients rotate.

**Dr. Davidson:** Okay.

**Wendy:** Yeah. So let's talk about probiotics that are sitting on the shelf, spore probiotics compared to ones that are refrigerated and which ones should people purchase when they're making a purchase of probiotics?

**Dr. Davidson:** Yeah, that's an interesting topic. I've definitely have some mixed views over the years on it. The Original Medicine's soil-based organism, the Ancient Mineral's soil-based organism, their claim on it, and I'll just say claim because I don't know if any of us really know the true right answer.

Their claim is that it's so resilient that you don't have to refrigerate it, but you optionally could always refrigerate probiotic supplements to help the resiliency.

What goes on in my head when I think about that question, Wendy, because it's a great question, is I think about, "Well, if the probiotic has to be in the fridge, does it mean it's not as resilient than one that doesn't have to be in the fridge or is it more of a precaution to try to protect it more?" And then "What happens to the probiotic when it actually hits our stomach?" when it hits 98.6 degrees and it hits acid.

And so I think besides the refrigeration of a probiotic, whether it's refrigerated or not. Like MBC, for instance, by Systemic, they recommend to refrigerate it. But to be honest with you, I don't really think it's needed. And I know that because behind the scenes, they've

had this one bottle for over four years that they just randomly test. And it still comes off, off the chart showing more bacteria than even the label claims and it's not been refrigerated. So I think a lot of it comes on to the quality of the manufacturer.

I think refrigeration is definitely a good extra step to do. But also, I think, another consideration too is what the capsule is made out of? Is it going to dissolve in the stomach or is it going to make it more to the small or large intestine and then open up then too? So I think there's multiple pieces to that. What's your feeling?

**Wendy:** Well, I was going to ask you that. There are a lot of probiotics that say on the bottle that they have an enteric coating for the capsule, or the pill, or what have you. And that survives the stomach acid and makes it to the small intestine. Is it a requirement that people purchase probiotics that have this kind of protection or they're wasting their money otherwise?

**Dr. Davidson:** I think it depends on what their goal is. So your body has bacteria in the mouth, it has bacteria in the small intestine, it's got bacteria in the large intestine. But if you look at the condition called SIBO, S-I-B-O, and it stands for small intestinal bacterial overgrowth, if somebody has SIBO, small intestinal bacterial overgrowth—and all that means is that there's too much bacteria in the small intestine—then I would say, "You know what, you probably don't want to take a probiotic that's going open up and get into the small intestine," because you could potentially feed that bacteria and make the overgrowth worse. That's a thought process from it.

But if you're having a dysbiosis

and maybe it's not an overgrowth of certain bacteria, like SIBO, but it's just a dysbiosis, that there's more of colonies having are some disagreements so you need to just put some more good guys in there, then maybe you would want the capsule to open up sooner.

The stomach acid, obviously, is really strong. It's very acidic, that's why they used to think, for years, the stomach was sterile. But now we know it's not, that there are bacteria, like *H. pylori*, which has gotten a lot attention over the years. But also finding that *H. pylori* can actually help with even like hunger cravings and things like that. So where *H. pylori* has been villainized, it's also kind of been shown that it might actually survive in the body well just through its own symbiosis relationship.

So I don't have a straightforward answer for you. I think I like to look at people's individual cases and look at their digestive tract, see what they're struggling with and try to look at that. Indigestion is a big thing. And I think getting some things that promote acid production before the food hits the gut can help that. And an easy thing, actually, with bacteria in it is that apple cider vinegar. Bragg's makes a good brand but something that's raw and unfiltered. Bragg's apple cider vinegar, that's got probiotics in it but it also helps secrete stomach acid to help prep the body digest it.

If somebody is struggling with constipation, that's definitely a sign, I think, of an enteric-coated probiotic and loading up on it. Because the bacteria in your gut actually impact bowel movements more, in my opinion, than even fiber does. That's given that new research that came out earlier this year that showed that

you're basically more bacteria than human cells before you go number two, but after you go number two, now you're actually human than bacteria. And so there's so much bacteria that's in the gut and especially the large intestine and that's such a big facilitator with bowel movement.

I think depending on somebody struggling with diarrhea, constipation, indigestion, maybe immune challenges, it would kind of differ as to what the recommendation is. But I love the idea of enteric coated, but also it's a cost perspective too. Is it worth the investment? Is it going to be the game changer?

What's your thought on enteric coated? I want to ask you too.

**Wendy:** I'm supposed to be interviewing you. It's the same thing, it depends on the goals, but I was just wondering what your thoughts were on that.

So let's talk about when to take probiotics. What's the best way to take them, like first thing in morning or an empty stomach or with food or what is your take on that?

**Dr. Davidson:** My personal take is definitely more of an empty stomach. I know there's people out there though that say take it with food. And I think it can help digest food. But I view more like in a supplement world and helping digestion. If you have problems digesting food, I love apple cider vinegar, which has got acetic acid in it, before a meal. So you take a tablespoon or two tablespoons, eight ounces of water, drink that beforehand and that can help pump the stomach acid up.

You can also just take an HCl supplement. In the front end, you can take digestive enzymes during

the meal. I think that helps digestion from that side. So I love probiotics more on an empty stomach.

I think if you're not taking anything before bed, I think before bed is a great time. If you do intermittent fasting where you kind of skip breakfast, I think probiotics in the morning are great. I love the idea of an empty stomach. And I love the idea of when you take probiotics it can sit in the gut and colonize where you're not taking in probiotics, taking a bunch of food, and it pushes it through. That's my clinical opinion on that.

**Wendy:** What if someone has an intolerance for probiotics? A lot of people will start taking them and then can have gas or even diarrhea or constipation or other kind of issues. What are some of the ways or proper ways to dose probiotics when you first begin taking them or begin taking a really strong one like a clinically proven strain that might be a lot more effective than the one you were taking prior?

**Dr. Davidson:** Yeah. So when you take good bacteria or when you take bacteria, it'll compete for other things in the body. So if you have a lot of bad bacteria or dysbiosis in the gut, it's very common where you take probiotics especially high amounts right away, where you might have some loose stool or diarrhea for maybe a couple of bowel movements or even part of a day or a couple of days depending on your situation. So a way to kind of ease into that to prevent that would be more of taking a lower dose, kind of a slow and low approach, so it isn't quite so abrupt to the body. But I think depends too on your personality.

My personality is I want something done yesterday. Where my wife, Heather, she's

one to more that has to process and always kind of wants more of that slower. So I think it depends on personality as to what you could tolerate. But I would say, if somebody has an intolerance to probiotics, it could be a sign actually of SIBO, the thing I mentioned earlier, small intestinal bacterial overgrowth. It could be a sign that you're feeding that bacteria in the small intestine, where most of it should be in the large intestine.

So I see that maybe being kind of contraindicated probiotics if you have small intestinal bacterial overgrowth, SIBO. But I've also ran into some experts, like there's an expert, Dr. Jack Tipton, one of his clinical pearls that he's found with SIBO, is that you take a very small, small, small amount of probiotics and you do that over a short period of time and that can help the SIBO-type effects too. So it's almost like a homeopathic version of probiotics to help that.

I think it gets very individualized and I think it's things that you, as a listener that's listening right now, you can experiment with. And, of course, you can always get a health coach or somebody to guide you that's been through it to try to help speed it up. But if you do things at home or on your own, I think maybe you can try things both ways if you are suffering with SIBO. And probably the easiest—there's testing for SIBO. I don't lean toward much of the testing, because I think there can definitely be a lot of false negatives out there.

I like to ask simple questions, like, "Okay, when you eat healthy carbohydrates—so if you're eating cauliflower or Brussels sprouts or broccoli, the healthy foods—do you get bloated, gassy, belchy after eating that?" that could be a sign of small intestinal bacterial overgrowth. If you feel bloaty,

gassy, and full and it's more of the upper abdomen, kind of right below the rib cage versus the lower abdomen. If it's more the upper, mid to upper abdomen, that definitely has more of a small intestinal bacterial overgrowth than the very lower, lower abdomen.

Doesn't completely rule out, but those are some keys to it. If you have an intolerance to probiotics, that can be definitely a sign of small intestinal bacterial overgrowth, so maybe completely avoid probiotics and try to starve the bacteria down before reintroducing the bacteria in the large intestine. Or like Dr. Jack Tipton, like I learned from him a while back, try and maybe even a microscopic amount of probiotics to try to get the body to kick through the small intestinal bacterial overgrowth.

**Wendy:** What is the treatment for SIBO?

**Dr. Davidson:** Well, medical treatment is antibiotic to kill the bacteria. So my wife, when she was seven years old, got sick, went into a coma for six weeks. And in that time period, they figured out it was Lyme disease. And they gave her antibiotics IV, so she was on that for a couple of years, oral antibiotics. And basically, from that point forward, she had always struggled with health issues. And then when my daughter was born, just over four years ago, basically, stuff hit the fan and she almost died.

And I look at that situation—and to give you the end of that story, she's as healthy as she's ever been today, having a couple of heart surgeries before, sinuses scraped, dizziness. I mean just crazy stuff that she had in her past. But she's as healthy as she's ever been today. But I looked at it and I said, "The antibiotics, if that was really the solution for Lyme disease

or other bacterial issues, then that would've taken care of her health issues."

But I think, we lose the aspect that we have to look at the body as a whole. And probiotics and bacteria, I love it, I think it's so important, but you can't forget about the other pieces. That's why I'm so excited to listen to the rest of your summit, Wendy, with all the different topics, because it all matters. It's all such an important piece to the topic.

**Wendy:** Yeah. And I was going to bring up that question. A lot of people have taken antibiotics, like your wife in the past, and it can dramatically impact their health going forward. Can you talk a little bit about how antibiotics, while a necessary evil, at times can really decimate your probiotic gut bacteria and your health going forward?

**Dr. Davidson:** Antibiotic consumption will kill bad and good bacteria. And it won't kill all the bacteria, you'll never be able to have a sterile body. There's always going to be bacteria. So the key to focus on is not to kill the bacteria in our body or to sterilize everything in our environment. Really, the key is getting good cultures, good bacteria in our body to make sure that they keep the bad ones at bay.

So antibiotics kill bacteria. But what I have mentioned earlier too is bacteria affect epigenetics. So if you were to kill bacteria and beneficial bacteria that were triggering a gene to turn on to promote right methylation or to promote the body's metabolism to be effective and functioning. And all of a sudden, you kill that bacteria and that gene gets switched off, you can literally affect the epigenetic expression or the genetic expression of your body simply by taking antibiotic. And for you

listening right now, you might be saying, "Well I don't take antibiotics, Dr. Jay, and I don't have to worry about it." But most of the antibiotics that are given are actually given to our animals.

So when you think about going organic—I love the idea of going organic, but it seems like most people start with fruits and veggies first, and I would take the opposite side of that. I would say, "If you do consume dairy, and if you do consume meats, then make sure those are organic," because those animals are fed antibiotics.

There's, roughly, I think it was around 30 million pounds of antibiotics were basically produced. This was about 10 years ago, I remember seeing the stat. But 30 million pounds and only about 5 million of those were actually given to humans, where 25 million, so the vast majority of those antibiotics were actually given to animals.

So eating, consuming foods with antibiotic residuals, I don't think we fully understand the impact that can have on our gut.

So I think eating food that are definitely not contaminated with antibiotics, not having antibiotics, not taking them, and of course, there's always those life-threatening type times. And if you're not exposed to antibiotics and not taking them regularly, then that's where I feel antibiotics could save your life, if it is that time and place. But antibiotics, definitely, there's a lot of downside to them.

And I think we're seeing the ramifications now from the vast over prescribing of antibiotics from 10 or 20 years ago. I was a guy that grew up on antibiotics. I was sick all the time, sinus infections. I've been working at restoring my microbiome and my bugs in my body, just from my past issues that I've had growing up.

**Wendy:** And what about natural antibiotics? Because a lot of people, they need some sort of antibiotic at some time if they get bad infections. So, natural antibiotics can entail olive leaf, garlic, colloidal silver. Can you talk a little about those and if those can negatively impact healthy gut flora?

**Dr. Davidson:** Yeah. The natural antibiotics – and those are big, especially in the Lyme world, because people are always looking for more natural things to go after bugs and things. I love those. Those can take down bugs, but they don't seem to really impact the healthy portion of our body. So it's almost like you can get the effect with more of a natural type of, if you will, antibiotic that with the prescribed antibiotic, but without the negative side effect.

Colloidal silver is a great one. There's definitely a couple great brands out there. You'll kind of hear some arguments in the bug world. Some people love Argentyn 23, it's more of an elemental silver. Some people love the Results RNA. I think it's ACS 200 is that brand. It's actually been clinically shown to kill Lyme disease as a bacterium.

But colloidal silver really gets absorbed in the small intestine. So for those people that are like, "Well I'll never take colloidal silver because it's going to kill all my good bacteria."

Well, it could kill good bacteria potentially. But if it's absorbed in the small intestine, then it's really not going to touch the bacteria in your large intestine. That's where most of the bacteria should be. So that might actually even be—thinking about that now... I love your questions, Wendy, you're just totally keeping me on my toes today. But I almost think, maybe even a colloidal silver might be a good benefit for somebody that's dealing

with SIBO, small intestinal bacterial overgrowth.

To summarize, I would say, the natural stuff, always a way to go. It seems like that's how the body was designed, so many herbs and things that have properties to them like that or foods. Our bodies were basically created or designed to handle those. The synthetic things that are man-made, I think that's where we really want to be a little bit wari-er of.

**Wendy:** Yeah. And just to add one more thing, I think. I've had clients come to me saying, "I've been taking olive leaf for a year," or they just take other natural antibiotics on a regular basis. And you have to be careful, because they can negatively impact your gut flora. So they need to be used conservatively just like a medicinal antibiotic.

**Dr. Davidson:** Yeah. I love your statement, I wouldn't long-term consume any natural antibiotic to try to always be killing—and over-consuming one thing too, I think that's a great point, love it.

**Wendy:** So let's cut to the fun part of the talk about implants. Because I know there's some people, they take probiotics orally and other people like to do rectal implants of probiotics. What are your thoughts on those and any pros and cons?

**Dr. Davidson:** Yeah. So this would fall into the fecal matter transplant/using a probiotic. It's always an interesting topic when you start talking about this because people always start thinking or saying, "You put what where and you do what?" because it's always an interesting topic. But if you're trying to target a specific area, you could always open up probiotic capsules, make an enema solution and use a little bit longer of an enema tube that would kind of get higher up in the large intestine. And it's hard to get all the way up there, but you can

always do something like that and try to, literally, put that bacteria in that area, specifically. I think that is definitely an option.

The fecal matter transplants, where you basically take feces of another human and then kind of filter the chunks out, put in some saline water, and then put it up your rear end to try to get their bacteria into you. That's definitely gained popularity, I'd say, in the last four, five years really when it kind of started turning the corner. And then a couple of years ago, the FDA said that's actually a medical procedure, and you can't do that in the United States.

There's some great websites out there to kind of walk you more through it, and there's even places you can go overseas. But, I guess the reason I bring that up is there's certain bacteria that basically you can only get from another human that we haven't really been able to stabilize in the supplement.

And there's companies that's out there right now—I know Systemic Formulas very well that's why tend to lean toward them just from a clinical side. But they've actually been, and I know in the last two years, they've been trying to stabilize human bacteria species. They've actually been able to grow them. But now they're trying to stabilize them inside a capsule to survive so that you can actually take it.

So it's almost like you could get what we could call a "poop pill." I mean, it's not poop, but poop

bacteria in a capsule form. So I think the supplement industry and what is going to be available naturally over the next couple of years, it's going to have lots of options, lots of good stuff, but it's identifying what are your main issues.

And backing up the train just a little bit, the only reason that we would take supplements is we want to improve our health. The only reason we want to improve our health is because health impacts everything. And so if we don't have our health, we want to take a step back and say, "What is the source or sources that are robbing me from having health and going after that?"

So looking at a supplemental standpoint instead of reading things that say, "Oh, that's good for this, that's good for that. Sure, I'll just add that to my regimen," Let's be a little bit more pinpoint in saying, "You know what, I think these are my main sources of issues. How do I get to those? What are the phases to get through to get to them?"

And usually fixing the gut is always an important piece to it. So that's where probiotics could fit into it. But you want to look at it very individualized and say, "What are you lacking? What do you need and what's the best step for you?"

**Wendy:** Yes. Well, Dr. Davidson, thank you so much for that informative talk. And tell the listeners where they can learn more about you?

**Dr. Davidson:** Yeah. The best place is actually my website, Drjaydavidson.com, so doctor is just D-R, jay is J-A-Y, and then Davidson, like Harley Davidson, just unfortunately no relationship. That's the best place to find me.

**Wendy:** Well, thank you so much, Dr. Davidson. And everyone, thank you, again, for joining our summit on supplements. Of the tens of thousands of dietary supplement products sold today, only a third have some level of safety and effectiveness that's supported by a scientific evidence and research. So you could be taking supplements doing more harm than good.

Please, please take home this life-saving information home with you by clicking on the banner beside or below our discussion and be sure to share it with your loved ones.

And don't forget to visit Dr. Jay Davidson at his website, Drjaydavidson.com. I promise you're not going to be disappointed.

My name is Wendy Myers. And my hope is that you and your family experience abundant health, and that all begins with taking the right supplements for you.



# Comprehensive Lyme Treatment Strategies

Jay Davidson, DC, PScD with David Minkoff, MD

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**Dr. Davidson:** Hello! This is Dr. Jay Davidson from DrJayDavidson.com. I'm excited to welcome you to this very special segment of the Chronic Lyme Disease Summit. According to the CDC there are more people affected with Lyme disease each year than breast cancer. That's including invasive and non-invasive together.

Today, my special guest is Dr. David Minkoff. And we're going to address comprehensive Lyme treatment strategies. But before we do, a little bit about Dr. Minkoff. Dr. David Minkoff graduated from the University of Wisconsin Medical Center in 1974 and was elected to the Phi Beta Kappa of medical schools, the prestigious Alpha Omega Alpha Honors Medical Fraternity for very high academic achievement.

He then worked for more than 20 years in the area of traditional medicine before making the major switch to alternative medicine when he and his wife Sue founded Lifeworks Wellness Center in Clearwater. Lifeworks is now one of the country's foremost alternative health clinics offering a wide-range of cutting-edge protocols.

In 2000, Dr. Minkoff founded Body Health, a nutrition company, which offers a unique range of dietary supplements to the public and

practitioners. Dr. David Minkoff is passionate about fitness and is a 41-time Ironman finisher, He also writes two weekly newsletters, *The Optimum Health Report* and the *Body Health Fitness Newsletter*. Dr. Minkoff, welcome!

**Dr. Minkoff:** Thanks, Jay! Great to be here with you!

**Dr. Davidson:** Well, I see University of Wisconsin Medical Center, 1974. That happens to be the same town my wife grew up in, which contracted chronic Lyme disease. So I find that rather ironic. Did you grow up in that area, too?

**Dr. Minkoff:** I did. I grew up in Madison. I went to high school and college in Madison and med school. And then, when I finished med school, I went to UC San Diego after that. But when I was growing up, there was no Lyme disease. It was unknown.

But it's funny. My brother has a place just outside of Madison. And we were there actually last Thanksgiving walking around the woods. And two of my grandkids had ticks. And my brother had a tick just from a walk in the woods in the cold, just outside of Madison. So they're swarming there.

**Dr. Davidson:** It's amazing how much things have changed. My wife was born in 1982. And when she was seven years old is when

her whole coma for six weeks, got sick of chronic Lyme. So that would be about 1989 roughly. So obviously from that point of graduating to somewhere around there is when the tide started turning.

So I just really want to dive in. With all the different illnesses that are happening, not only in America, but really across the Globe, there really seems to be a set of what we'd call, "predisposing circumstances" where somebody could get an infection or even in some can continue really into a chronic condition.

Obviously, with your specialty in Lyme and focus in Lyme disease, what are the factors that seem to be coming up most in patients that really need to be handled for somebody to get better?

**Dr. Minkoff:** Well, what I've found, we have people from all over the world that come to our center, to the Lifeworks Wellness Center, who have Lyme. And their Lyme disease is usually secondary to a whole bunch of other things that are going on in their body, that if we correct, their chances of getting better from their Lyme disease are really very good. About 85% of the people that we see get better. And a lot of them are really sick.

So I think the body is out of sorts to begin with. I think these Lyme

organisms have been around for, if not thousands, millions of years, they take advantage of a host that's damaged. And if we can reconstitute the host or the basic general things that the body's supposed to do, I think people can get better with the right therapy.

Now, the first thing or the biggest thing that I find that's wrong with some patients with Lyme—but it's a lot of them; it's probably 80%—is that they have dental problems. They have gingivitis, dead teeth, root canal treatments of teeth, cavitations in their jawbone.

And often when we test them on first glance, these are major sources of suppression for their body that these low-grade infections tie up a lot of their immune system. And their immune system then doesn't have enough oomph left to deal with another secondary infection. So that's on the top of my list.

**Dr. Davidson:** Wow! Would you say having the teeth issues, that like you said suppresses the immune system? Do you find there's a correlation with organisms living there and just the body's inability to fight them if the teeth aren't really dealt with?

**Dr. Minkoff:** Yeah, unfortunately the approach of modern dentistry is that if the teeth look good and they don't hurt, it's all fine. Now, dentists have a high degree of suspicion on gingival disease. And the links of gingival disease with heart disease and autoimmune conditions are well known.

I think the things that aren't looked for very hard are people who may have dead teeth or teeth, especially root-canaled teeth because these teeth are chronically infected. They're dead. There's no way the immune system can get in there.

They're full of toxic bacteria. There's a lot of biofilms within the tooth structure itself. So the immune system can't get to it. Yet, the bugs, when you culture them, when these teeth are pulled and analyzed, when you culture them, the bacteria that are there often produce high levels of biotoxins, which inhibit normal cells from doing their normal thing, especially for making energy.

The same thing can occur with cavitations. The person had a wisdom tooth pulled when they were 16. The place in their jawbone, especially lower jawbone, never healed in. There's bacteria that can be there. It could also be a dump site for various toxins, heavy metals, chemicals, pesticides. And it's an area that the body can't get to very well.

But these things are only a couple of inches from the brain. And the major nerve trunk that goes to the jawbone is the largest nerve trunk in the body. It goes straight into the midbrain. There's no relay point. And so for the body, this is a potential great source of stress because if the brain gets damaged or infected, then the major control of the body will go away. Even the consciousness of the person may go away.

So the body takes this very seriously. And it mounts a big immune response in that area. And a lot of times, these are asymptomatic. The person doesn't have pain. And you can't see anything wrong. And this is something we're going to talk about later. But a lot of times, unless you have specialized ways of diagnosing these things, you won't find them because it may or may not be apparent on x-ray. And often, it's not even looked for because the person has no complaints. So it's a big issue.

And when I get a chronic Lyme

patient who's been to 14 doctors—that's the average of the people that come to my clinic—they've been to 14 doctors. Many of them have had years of antibiotics. That if they have dental foci, things in their mouth, which aren't right, especially root-canaled teeth, I inside jump for joy. And I tell this person, "I am going to be able to help you because the major source of your problem is probably your teeth. And if we can clear that up, there's a good chance you're going to get better." And this pans out over and over and over again.

**Dr. Davidson:** Well, let's talk about that because it's interesting. With your background, Dr. Minkoff, medical doctor, but specialize really in infectious disease. Is that correct?

**Dr. Minkoff:** Correct.

**Dr. Davidson:** So with all the typical iLabs, doctors, and prescribing antibiotics, what is your opinion on antibiotics? And where do you stand on this whole topic?

**Dr. Minkoff:** Well, like you said, if I did a subspecialty in infectious disease and I worked with one of the most eminent infectious disease doctors in the world at the University of California in San Diego. And we would meet with him every day. And I did antiviral research at the same time. Is that sometimes antibiotics can be lifesaving. And they're good. So I tell a patient, "If you got bit by a tick two days ago and you've got a bullseye rash and you feel fluey, I would treat you with antibiotics because the cure rate on that is very high."

But if you've got stage 3 Lyme disease where you've got autoimmune systems, joint symptoms, neurological symptoms, chronic fatigue,

immune suppression, I have not found that antibiotics are helpful. And most of the patients that we see have already done. They've done antiparasitic, antibiotics, you name it. They've been on it for many times, years—oral, IV. And they're not better. So our approach is, "That doesn't work." And there's some reasons why that doesn't work.

I could maybe go into this right now. Is that the *Borrelia*, itself, this bacteria, is among the most sophisticated bacteria known. If you take your average strep or staph, they may have some things inside of them, which are called plasmids. And plasmids are little pieces of DNA material that allow that cell to be resistant to something. So if the staphylococcus is resistant to penicillin, then you need another drug or a methicillin-resistant staphylococcus.

It's because that basic germ, that basic bacteria has some information that's gotten inside of it that allows it to not let the antibiotic work. And your average bacteria has between zero and three of these little extra pieces of DNA, these plasmids, with which it can try to survive in the face of either of the body's attempt to kill it, or outside antibiotic techniques.

The Lyme bacteria has 23 of these plasmids, more than any bacteria known. So it has a repertoire of things that it can do to avoid being killed by antibiotics. It can change its basic shape. It can go dormant. Which means, it's basically asleep. If it's not dividing, the antibiotic won't have any effect on it. It can hide. It can go inside of cells. It can go inside of tissues. It makes a toxin that can block or kill our own cells that make antibodies.

The CD57 test, which allow the patients that are listening to this

may have had, is a marker for a certain type of lymphocyte that makes antibodies toward Lyme and TB. Those are the two main things that are known. But the bacteria has a toxin that will kill the lymphocyte.

And so while 180 or so CD57 cells would be a nice average range, we see some patients that might have four or six or eight or fifteen. Their whole lymphocyte system, which is supposed to produce antibodies to kill this bacteria, has been itself killed by the bacteria. So the thing is very smart. It's very Fabian. It can hide. And so if you try to treat it with just antibiotics, it isn't usually successful.

And so the things that we're doing to try to unburden the immune system, so fix the teeth. The other part of this, which almost always occurs, is that their intestine is under a lot of stress, too. And usually what we find—and we do this with very objective testing—they don't have enough digestive enzymes. They don't have hydrochloric acid in their stomach. They don't have the right profile of good bacteria.

A lot of these people have been on antibiotics. And they've got three to ten nasty, terrible, invasive bacteria. *Pseudomonas*, and *Enterococcus*, and bad guys in there that themselves cause inflammation, infection in the intestinal wall. But they also produce biotoxins, which then go into the system and cause problems other places.

A lot of these people have yeast or other fungi in their intestine. A lot of them, the immune system in the intestine's overwhelmed. They're what's called IgA. Their intestinal IgA oftentimes is very suppressed because the immune system's trying to kill these things off, and it can't produce enough to even do it.

Many, many people have parasites that they don't know about. And if the doctor's looking for LabCorp or Quest for parasites, it's pretty much a waste of time. But there are good labs in this country where you can find parasites. And many people have them. They have flukes or they have roundworms or they have ropeworms or they have tapeworms or they have blastocystis. And in Lyme patients, these things are very common. And if you don't fix this stuff, then the patient doesn't get better. So you have to heal up their gut.

**Dr. Davidson:** Wow! Just you said the average bacteria has zero to three. Was it plasmids?

**Dr. Minkoff:** Plasmids. Yes.

**Dr. Davidson:** And then the *Borrelia burgdorferi*, or obviously the Lyme bacteria, has 23?

**Dr. Minkoff:** Yes.

**Dr. Davidson:** Just that in itself explains the complexity of really Lyme disease. And then, of course, as you're talking about all the other things that usually get associated with parasites and other types of bacteria that add in or jump in where the immune system's already suppressed and more things pile on to it, as you're talking about the gut and the gut digestive tract being such an important role, of course, people will a lot of times, think that the main thing is changing my diet. Where do you feel like foods and diet fits in for people recovering or really on the path to get their life back from Lyme disease?

**Dr. Minkoff:** Well, what I suggest with most people is they go on a Paleo-type diet. So they go off grains and they go off dairy and they go off beans. That they eat organic as they can afford. And that if it comes in a box or a package and there's any other

ingredient on there besides what the food is, don't eat that. And that works for most people. So a peach is a peach and a chicken leg is a chicken leg and a broccoli's a broccoli.

But what's a Triscuit or a Cheerio? You just look on these things and it's just like chemical after chemical after chemical. And chemicals aren't food. So I try to get them eating this way. And almost everybody does well on it if they can get through the first two weeks. And we don't usually have any artificial sweeteners. Normal spices are fine.

There's millions of recipes now and beautiful books on how to eat Paleo. And my wife makes a Paleo lasagna that if you came over to the house and ate it, you'd never know it wasn't real cheese. You'd think you were eating regular lasagna.

But the only exception I make to that is that sometimes if people have a lot of neurologic symptoms or they have seizures, I will try these people on a ketogenic diet so that 80% of their calories are fat and only 10% protein and 10% carb. But mostly, I start people on Paleo. And I find that within six weeks, most of their chronic digestive problems, their heartburn is gone, their constipation is gone, their chronic bloating is gone, and, of course, reduce a lot of things at the same time.

So we're giving them digestive enzymes and hydrochloric acid and good flora and something natural to kill off the yeast and the bad bacteria. I usually see people back at five weeks. And almost everybody is feeling better. And a lot of it just has to do with their gut.

Now, some people have food sensitivities. And I may also at the same time do an ALCAT test. Or

in our office, we have a way using electrodermal screening to screen people for food allergies because they might be allergic to good foods, too, that we got to pull them off temporarily so that it won't cause them problems with their gut.

**Dr. Davidson:** That makes sense. The lasagna sounds amazing. The next time I'm in your area and your wife's preparing it, I might have to invite myself over to your house.

But you mentioned two weeks with Paleo. If they can get through the first two weeks, is that more of the sugar craving that you find? Where does the two-week thing come from?

**Dr. Minkoff:** I think it's sugar. I think it's these glutens and gliadins and caseins are their pseudomorphines, their pseudoopioids. Or they act in the body like that. And that these people have a withdrawal. So I just say, "You know, for the next two weeks, you might suffer. You know. You might find your blood sugar's up and down. You may have some headaches. You may have some mood alteration. Just hang with it."

The first thing, we have them see our dietitian. But the first thing on her list is number one, clean out your cupboard. I know from my own experience that eleven o'clock at night, nobody has any willpower. And if you're hungry and it's there, there's still some cookie stashed away or there's some saltine crackers or there's some whatever your favorite ice cream, whatever it is, that you're not going to make it.

So number one is clean out your pantry. Take it to Goodwill or to somewhere or get rid of it and then fill your pantry with good food. And then, when you're hungry eat, but eat good food. And usually by two weeks, the cravings go away. And

people actually start to feel better. And then, there's enough positive gain that they'll hang with me on it.

**Dr. Davidson:** That's excellent. Yeah, I always tell people, "When you start having the cravings at night, that's time to go to bed. Early to bed, early to rise. Stay away from all those snacks."

You mentioned antibiotics and not a fan of it, which I would completely agree with you. My wife wouldn't have suffered for 20 plus years of chronic Lyme if antibiotics, IV, and oral would have worked. So clearly that wasn't the answer for her either. But what are some typical supportive therapies that you tend to use more commonly or that you feel are very valuable for people with Lyme?

**Dr. Minkoff:** Well, let me just mention one other thing. One of the things I learned when I was doing the infectious disease fellowship is that it really helps if you look at someone's blood under a microscope because there's a lot of things that you can see.

Now, a standard infectious disease approach, if someone is diagnosed with suspected syphilis—and syphilis is a spirochete, which is in the same family as *Borrelia*—so the way you're supposed to do it as an infectious disease doctor, if you suspect *Borrelia* or syphilis, is that you take a drop of the person's blood from their finger. You put it on a microscope. And you look at it under what's called darkfield.

Now, a regular light microscope puts the light up from below. And if you look at blood, when the light is coming straight up from below, it's so pale that you can't see anything. So usually when laboratories look at blood, they stain it. And in the process of staining, the cells are all killed. So you

have dead cells. And there's a fixative added so that they're dead. And then, they put stains on—blue stains or red stains—so that you could see what's what.

When you look at a darkfield, you don't stain it and you don't put anything on it. But the light doesn't actually come from below. The way the microscope is rigged is that the light comes from the side. And you can see the shadows of the cells on the slide. But the cells are alive. And you can look at these white blood cells and you see inside. There's actually motion. These things are alive. And you can look at the red blood cells. And you can see how they're doing.

And normally, a red blood cell carries a little bit of a negative charge, electrical charge on its surface so that when it gets next to another red blood cell, it doesn't overlap. They stay a little bit apart. And when the red cells' doing well and when it's healthy, they stay apart so that when they circulate, they can give and receive oxygen and carbon dioxide the way they're supposed to.

A lot of times when people have Lyme with nutritional deficiencies and toxicities, their red cells and the metabolism in their red cells isn't very good. And they don't have enough electrical charge. And the cells start to stack up. They look like a stack of coins. And when you look at the blood on a darkfield, you can see this. And here they are. The blood is all stacked up.

And so one of the supportive therapies is if I see this is if I put them on, it's called a Mas Mat, and it's a mattress that delivers a very low level pulsating magnetic field. And it actually recharges the red blood cells. And it lasts from a few hours to even up to two weeks in some people.

And if I look at someone's blood and their cells are all stacked up and a

lot of their symptoms are chronic pain, they have fibromyalgia, they have all these areas in their body where there's lactic acid build up and they're painful and they have painful bumps all over the place, I know they're not circulating. And I know they're not delivering oxygen.

And if I put them on this Mas Mat three to five times a week for half an hour, and then I look at their blood on Monday and it's bad and I look at their blood on Friday, their cells are all recharged and now their cells are circulating and their pain will go down 50% to 75%. Just doing that.

**Dr. Davidson:** Wow! It's like basically like a battery charger for the cells, in other words.

**Dr. Minkoff:** Exactly. And it not just does the blood cells. But it does all the cells. Because their liver and their spleen and their kidney and their brain, when someone's got brain fog, and they can't think and they can't remember and they can't sleep, their brain is not only inflamed, but it's not getting oxygen.

And it's not detoxifying and by adding energy from the outside, until you can actually get their metabolism working again and turned back on is enormously helpful. And so that's a supportive therapy that's very easy to do.

And, in fact, we have a lot of patients that, they'll buy their own mat. And they'll do their mat at home every day. And most patients love it. I try, if I can, to empower my patients so that whatever they can do on their own, they can do, which makes them independent.

**Dr. Davidson:** Absolutely. Absolutely. Are there any other supportive therapies that are good that you like or recommend? Or that's the main one? And is that a form of basically like PEMF—

the pulsed electromagnetic field therapy—essentially?

**Dr. Minkoff:** Yes, it is that.

**Dr. Davidson:** Okay.

**Dr. Minkoff:** The other thing is I find that it's very hard to get somebody better if you can't give them intravenous therapies. So we do intravenous cocktails with vitamin C, calcium, magnesium, B vitamins, and ozone. Ozone is nature's healer. It's nature's antibiotic. It's nature's restorer.

If you have a bad injury and you use ozone, it will get better faster. If you have a localized infection or someone with a diabetic foot, and you either put ozone on the surface or you inject ozone into the wound, it will kill the bacteria and rehabilitate the cells.

So we use it in everybody and not just sick people. I get a treatment of ozone every week. I'm an athlete. I want peak performance. We have a lot of professional athletes that come in because it enhances performance. It actually helps your mitochondria work better.

But in someone who's sick, their mitochondria, which is where the energy is made in your cells, they don't work. And by getting that mitochondria rehabilitated, it really helps. And the bacteria and viruses and parasites have no defense against ozone. When it hits them, it kills them. Our own cells have enzymes on the surface of the cells, which it activates the ozone. So it's not harmful to us. But it's very harmful to them.

And when we look at the darkfield, in probably 50% to 75% of the cases, we will see the organisms swimming around in the person's blood on a drop of blood. You will see these Borrelia. They're spiral shaped.

You see them twist through right on the field while you're looking at it.

And if you see one or two of these on a drop of blood, and your average patient has six quarts of blood in them, and in one drop, we see a couple of them, what it means is that there are millions of these things in their blood right now while we're sitting and talking to them. And the thing could be a hair's length away from a white blood cell, which could care less, it isn't even paying any attention to it. The immune system's so, either impaired or overloaded or suppressed, that it's not doing it. And if you put ozone in the blood, you kill these guys because they have no defense against it. So it's a mainstream of our therapy. And it's very helpful.

**Dr. Davidson:** Do you have a preference of...? You mentioned IV ozone. Obviously, there's like rectal insufflation where you put it in the ears, as well, too. Or do you find that they all have benefits, it just depends on the person?

**Dr. Minkoff:** Exactly. We have an ozone sauna, which is fantastic. It's heat plus steam plus ozone. It's another way. So most of our patients will do one or two of these therapies at the same time. And a little bit I'll go by how do they react to it and what do they find what makes them feel the best? But I'll usually start people, as a part of detoxifying, is put them in the ozone sauna for a half an hour or a couple of times a week and then give them IV ozone three to five times a week depending on if they're out of town, we'll try to do it fast. If they live in town, we would treat them less intensively.

If they have a lot of sinus problems, the ear ozone is very good. And if they have a lot of gut problems, they're rectal ozone is really good. If they have a big parasite load, the

rectal ozone is really good because if you treat them with the antiparasitic herbals and then you give them rectal ozone, in many cases, right when they finish the treatment, they'll go to the bathroom. And they'll see parasitic parts come out. So it's very helpful. And it's very safe. There's no risk in these therapies.

**Dr. Davidson:** Yeah, again, it goes to the importance of looking at your stool when you go a number two. Don't just go a number two and flush. Look at what's coming out of the body. So ozone fits in the killing categories of pathogens, Lyme, and probably other associated obviously organisms like parasites. Are there any other things that really you're a big fan of that fit into that pathogen elimination or killing category for Lyme and other bugs?

**Dr. Minkoff:** Yeah, intravenous silver is really good. Silver is manufactured by...The product is called Argentyn 23. It can be used intravenously. It's 23 parts per million of elemental silver. It's not colloidal silver. And I recommend people don't use colloidal silver.

In fact, I have a patient now who went on the Internet and found how she could very cheaply make her own silver solution. And she did that for a year. And now, she is as blue as a Smurf. I've never seen one in person. And I never thought it could happen. But there she is.

In fact, when she first came in, I wasn't sure what her racial background was because it was blue-grey. And I couldn't tell was she some exotic mix or where was she? And I said, "You know..." This is before I really started talking. And I said, "Where do your ancestors come from?" And she said, "Oh, I'm Scottish Irish. I've just had too much silver."

**Dr. Davidson:** Wow! In that, I would completely agree with you, Dr.

Minkoff, to not make that stuff on your own because I think isn't it the silver salts that can accumulate in the body. And then that's where that blue hue greyish can build up in the body?

**Dr. Minkoff:** Yeah. That's right. That's right. So this is elemental silver. And there isn't another company that makes a product that can be done intravenously. And I recommend that people don't use another one because if you look at this product on a microscope, it's uniform. It's not clumpy at all. And it's called a hydrosol. These particles are actually suspended in water. And it's very uniform. And you can do it intravenously. And the doctor has to be educated on it. But once you do it, it's very safe.

And the combination I find of when we do ozone and IV silver, within three or four weeks, we don't see the Lyme bugs anymore. We don't see them on the microscope. And when we do our energetic testing, we generally don't find them anymore. It really handles them.

**Dr. Davidson:** That's fantastic. Well, even silver, it's such a traditional. If the silverware was actually silver back in the day, as far as working on eliminating contamination, and they even talked about, before refrigeration with milk, that you literally put a silver coin in the milk to prevent it from souring just because of the natural like antibacterial-type properties that silver has. So it's really, really neat to see the type of cutting-edge treatments that you're doing with patients.

Because Lyme is definitely one of those—and you would probably agree with me on this—it's just so misunderstood, misdiagnosed, or really just not diagnosed. And there are so many things that can

seem to mimic Lyme disease, such as like ALS, lupus, Parkinson's, RA—rheumatoid arthritis. I'd even say MS or multiple sclerosis would fit into that. In your opinion, being a clinician that just works with obviously hundreds, thousands of Lyme patients, how many of the people would you say diagnosed with like these ALS, lupus, Parkinson's have Lyme versus—you know what I'm saying?—in correlation with it?

**Dr. Minkoff:** Well, here's what I've learned. And this is a fault of the way medicine is practiced and the way medicine is marketed. And that is that in order for an insurance company to pay a doctor, he's got to have a diagnosis. And the diagnosis has to have a number next to it, a CPT—a code. And then, the insurance company will pay for it.

And so I think as an outgrowth of this system, what's happened is that someone will come in with a symptom. And they will get a diagnosis made based on, "Yes, you have so many swollen joints. It's been going on for so long. And you have a blood test which shows that there's an antibody, a rheumatoid factor antibody or an ANA to something in your blood. And you then have a diagnosis of lupus or rheumatoid arthritis or multiple sclerosis."

And really those are great big wastebaskets, which have a big question mark on the side, which is, "We have no idea what's wrong with you. And all of our therapies are going to be immune-suppressive therapies. We're going to give you steroids or chemotherapy or cytokine-blocking drugs in attempt to so numb or castrate your immune system that the symptoms that you're having will go away. And at the same time, we're going to pretend that your risk of TB, cancer, serious other diseases, infectious

diseases, we're going to just keep our fingers cross and hope you don't get those."

So what we're trying to do with people is actually find a real diagnosis. If you go to the doctor with a sore throat and he puts a swab down your throat and he swabs your tonsils and he puts it on the plate and he grows it up and a strep grows and you have a fever and a sore throat and swollen glands, the doctor can say to you, "You've got a strep throat. And I'm going to give you X medicine. And it will kill that bacteria. And then you will be fine." And that is a legitimate thing to do.

But to say MS isn't a legitimate thing because what it is? Well, we're finding in almost all the immune diseases, the autoimmune diseases and the neurodegenerative diseases, so ALS, Parkinson's, multiple sclerosis, lupus, is that almost all these people have Lyme. It's not the only thing that's wrong with them. But they have Lyme and its associated co-infection. So there's another dozen organisms at least that are associated with this.

And some of them are parasitic. Some of them mycoplasma or anaplasma. Some of them are ehrlichias. They're all in between of things that are halfway virus, halfway bacteria, different structural forms. And they can go back and forth from one form to the another. These people have an infectious load, a big infectious load. And many of them have a viral load, too.

They have a smoldering Epstein-Barr or herpes 6 or varicella or chlamydia or mycoplasma. These things come along with this whole package. And the guy doesn't have just Borrelia. He's got usually four or five things that are going on in his whole system, plus another four or five things in his gut, plus he's got

his bad teeth. That's why they don't get better. There's just too many things wrong.

And the approach of the doctor, if it's like, "Okay, let's figure this thing out." This big confusion is like a big puzzle in a box. "Let's lay it out on the table. What have we got here? Oh, we've got Lyme and we've got anaplasma and we've got an ehrlichia and we've got a Bartonella. And oh, yeah, we've got a pseudomonas in his gut and two parasites.

And then we've got his hormones levels are trashed. He's got no testosterone and no cortisol. So we've got that to deal with. Then he's got a root-canaled teeth and bad gum disease. We've got that to deal with."

And then, as we systematically pull this thing apart, we can then target what's wrong with him. And the other piece of this puzzle, which I didn't mention, but I want to is that oftentimes because the gut is bad and because the nutrition isn't very good, is that they have major significant nutritional deficiencies. They have low amino acids. They have no vitamin D. They're low in selenium or zinc or essential fats. And their systems, their detox systems don't work and their energy-producing systems don't work because the stuff that's needed to make them work just isn't there.

And then, if you want to get somebody better, you got to pay attention to this, too, because the very typical patient, when I do all these lab tests upfront and when I see them back and we start going over these lab tests, they say to me, "Holy smokes! No wonder I feel so terrible." I say, "Yeah, you're not crazy. The last three guys tried to give you Prozac because they thought you were

just menopausal depression. But you're not crazy. This isn't a mental disease. You have physical things wrong with you.

And if we fix those physical things, everything will get better, including your Lyme disease. But if the doctor's not looking for this stuff, he doesn't know it's there and if his Band-Aid is give you cortisone or give you Prozac, he's doing you a disservice. Or giving you doxycycline for six months, he's doing you a disservice." Because he's not really doing his job of get a proper diagnosis of what is wrong with this poor person. And then, you can help him.

**Dr. Davidson:** Yeah, I would completely agree. My wife went through that. It got to the point where they didn't understand what's going on. And they just said, "It must be all in your head. And here's an antidepressant/antipsychotic and move on." And I think yeah, it's important to dig deep and understand that.

And when you were talking about so common with these diagnoses of the RA, MS, lupus, Parkinson's, they'll give a steroid or they'll do something that suppresses the immune system. In my book that seems like that's medical malpractice to suppress the immune system in a case where there's clearly pathogens or associated pathogens that could then just really take hold of the body even moreso. Do you feel like that drives things deeper and worse?

**Dr. Minkoff:** I do. I do. And sometimes in an emergency, these things can be useful on a very short term basis. Okay. But as a main line of therapy, it's just like the acid blockers. Okay, a guy goes to the emergency room. And he's got a big open bleeding ulcer. And you want to neutralize his stomach acid for two

weeks so that his ulcer can heal. And the doctor prescribes him Nexium or Propulsid or one of these drugs as a two week to just shut the thing off so that the acid's not eating away further his bleeding ulcer, that, to me, makes sense. And I think it's good medicine.

But then, it's got to stop. Then, when the ulcer's healed, then you've got to figure out another strategy like fix his diet, maybe give him some stomach acid that he might need. Give him some digestive enzymes or figure out what foods aren't going to make his stomach upset, then you're actually helping the guy. The original thing might have been in an emergency situation helped him. But as a long-term strategy, you really are hurting them. And it's not good medicine.

**Dr. Davidson:** Wow! You mentioned electrodermal screening when you were referencing teeth earlier. And I know you referenced autonomic reflex testing and electrodermal screening. What's your opinion on that as really using it to understand the body energetically, diagnose, and really hone in on exactly what's going on with that individual patient?

**Dr. Minkoff:** Well, I think it's almost impossible to treat complex patients if you don't have a skill that tunes into the autonomic nervous system. I tell patients this. "Look, we're going to look at the body in a four-component theory of look, here's all the things that could be wrong.

You know, it could be your structure. So you may need a chiropractor to adjust your back because your structure could be off. Or you need someone to align your teeth so that your jaw fits. That would be structure. Or if you fall down and break your ankle, you need an orthopedic surgeon to adjust that structure." So on one

level disease is structural. And the doctor's got to keep this in mind all the time.

On a second level, the disease can be biochemical. It can be a deficiency. It can be a toxicity. It can be a dioxin or a mercury. Or it could be missing a hormone or a mineral. So you have to look at the body at the same time on that because both things could be going on at the same time. You might need your neck aligned and you might need some zinc or vitamin A or something to get the mercury down in your blood.

The third level is your autonomic nervous system. It's the part of the body that runs everything. You can sit here and walk around the block, go to the bathroom, blink, breathe, and not have to have your attention on any of it.

Like, the body pretty much runs itself as long as the autonomic nervous system is healthy. But when it is full of toxins or it is missing things, it doesn't function right. And virtually, all of the symptoms that people get are because its not functioning right. And that can be high blood pressure to they got a twitch or they got a pain somewhere. Their autonomic is not balancing things.

And a doctor has to be able to evaluate this because if you can't, he's going to get stuck fast. And a lot of times as you're working patients through this, it's an onion peel. Like, we figure out what are the biggest stressors right now? "Okay, so he's got a root-canaled teeth and he's got a parasite and he's got a virus." And we treat that. And he says, "Oh, I'm better. But I'm not all the way." And I've fixed the biochemistry that I can see. But I still have a guy who's not quite right. And I need another way to look at him.

So if I do the autonomic testing...

And I just had this happen. This is a 35-year old Lyme patient from Canada who came down to see me a few months ago. And when he came, he was in a wheelchair. He couldn't walk. He'd had Lyme disease since five years old. He's 35 now. He had terrible pain everywhere. His main symptoms was he was too weak to walk and he had terrible pain everywhere.

And when we did our basic thing—fix the things that we already just talked about—and within three weeks, he was walking with crutches. And by six weeks, he was walking alone. And his muscle mass returned to his legs.

And his pain went away everywhere except for the side of his face, right below his ear. And he still had terrible pain there. And on the autonomic nervous system testing, what I found is that he had some chicken pox virus in that area, in the nerve in that area. I would have never found this with a physical exam or with a laboratory exam.

When I then treated him with a homeopathic for chicken pox and a targeted herbal for chicken pox, he got a huge resurgence. And he actually remembered that at five years old when he got sick, he'd actually had chicken pox. And he had this realization himself was this started the first thing that suppressed his immune system, which then when the tick bit him, he got Lyme. And he's all but normal now. He's gained back 25 pounds of lean body mass. He's walking around. He's doing really well. And you wouldn't find it with that.

And the doctor would be then like, "Try this. Try that. Maybe it's this." It's all just a big guessing game. But if the doctor can do some form of autonomic evaluation, you can find these things. And

the body will direct you to here's next. Here's next. Here's next. Here's next.

I had another one. This guy's from Germany. He was so toxic. And he tried a lot of doctors. And he was very reticent when I first saw him. And he was just like, "I don't know. I don't trust anybody." So I've been working with him very slowly because he's very sensitive.

His main symptoms were he felt like he was so anxious. And he had such morbid depression that he was most of the time afraid that he was just going to die. And that it would be a relief if he did. And I found that if he got colonics three times a week, within 30 seconds of finishing a colonic, all his depression went away. And his anxiety went away. It was almost like magic.

And we took him through a bunch of these levels. And then, he said, "You know, I'm really better. I'm really better. I can actually walk around the block now. I can exercise. I can work. There's just something left, some little thing that's left."

And the thing that I found out—this was last month—was that he had a high sensitivity to electromagnetic fields. And that's what came up on the autonomic testing. And I said, "How do you do around cell phones?" He said, "I can't be in a room where there's even a cell phone on. And basically I stay in my house all day long."

We treated him to the geopathic stress, to this stress from electromagnetic fields. And in one month when he came back, he took out his cell phone and he turned it on. And he held it in his hand. And he said, "This doesn't bother me anymore. This is a miracle."

So these things are if you have a way to tune into the body and the autonomic nervous system, it will direct you to where you have to go so that in the right order, you can fix this person so that the thing that you're doing is actually de-stressing them and not stressing them.

And I want to give you a really good example of when this is done wrong. This is what happened with my wife. And this is what got me into this whole thing is that she looked at her teeth. She's an athlete. She's a nurse. On any given weekend, she will win her age group or be a podium spot in a triathlon wherever she goes. And in 1995, she looked in her mouth and she saw rail to rail mercury fillings. She said, "I don't like the way these look. And I've been reading about mercury. And it's poisonous. And I want to get these out." Okay.

She goes to a dentist who advertised that he could remove mercury safely. He didn't know how to do it. He took her mercury out. In six weeks, she had thyroiditis. And then she couldn't lift one arm. And then, a week or two later, she couldn't move her leg. And she was diagnosed with MS. And I'm an emergency room doc at that point in my career. And I'm like, "What the heck is going on here?" And in her body—and this isn't the only one—I've seen at least 100 people since, they take their mercury out. And they get sick.

Or they find a well-meaning doctor who says, "Oh, we should give you chelation because you have mercury. And that's probably why you got chronic fatigue." But they don't tune into the autonomic nervous system to find out what is the priority? And if the priority is fix the gut and get rid of the parasites and get the nutrients back in so that

the guy could detoxify, and he's giving her something where now he's going to pull mercury out of her body or his body and then the body can't even handle the mercury and it's just another load on top of all the other loads, then they just get sicker. I've seen that happen many, many times.

So that's why I say I think the doctor has to have a way to see what's the health of the autonomic nervous system and how to direct their therapy so that they're working with the body and not against the body.

**Dr. Davidson:** That is just fantastic advice, Dr. Minkoff. Essentially, that's where people can spend years going to the traditional physician and not be getting better because things aren't really targeted to what they need essentially.

**Dr. Minkoff:** That's exactly right. And I think the medical professional has been so crazy on nobody else knows what's going on. And the whole thing that went on with chiropractic with the AMA and the...

**Dr. Davidson:** Yeah, Wilkes versus the AMA case?

**Dr. Minkoff:** is horrible. Yeah, the whole thing is that something could be said for naturopaths and chiropractors. And that these guys, I learned from them. When I want to learn how do you approach a body? Unless, I'm in the emergency room and he's got a bullet in his chest or he just fell down three flights of stairs and he's got a closed-head fracture, okay, fine. Or I've got to deliver a baby's stuck and you've got to do a C-section or the guy's got appendicitis or the guy's in the middle of an acute heart attack, okay, medicine is like brilliant. You want a doctor who knows his stuff.

But somebody's who's got some chronic illness, you want a doctor that can actually tune into the autonomic nervous system. And a lot of chiropractors and naturopaths, as part as their training, this is what they learn. And it's good medicine. And it's the way you can get people better.

**Dr. Davidson:** That's excellent.

Well, again thank you so much for joining us on the Chronic Lyme Disease Summit. As you've heard from Dr. Minkoff, antibiotics are not the solution, even though, it's the "typical medical route for Lyme disease."

And it's really important with Lyme disease and other mysterious illnesses, that we must look at the body as a whole holistically. And Lyme is just more than just a tick bite.

So definitely take this life-saving, life-transforming information that Dr. Minkoff went through home with you by clicking on the banner beside or below and definitely share it with your friends and loved ones. They're really depending on you.

So and don't forget to visit Dr. Minkoff online at his clinic. It's [LifeWorksWellnessCenter.com](http://LifeWorksWellnessCenter.com).

Again, Dr. Minkoff, thank you so much! Maximum blessings! This is Dr. Jay Davidson.



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