Tired All the Time? It Might Be Your Mitochondria — Dr. Bryan Rade Explains Why Transcript

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Introduction to Mitochondrial Health

And so the degree to which we feel tired is, I believe, in my opinion, a linear proportion to our degree of mitochondrial dysfunction. So if someone says like, man, I can't even get up off the couch to look in the mirror.

Well, they've got really bad mitochondrial dysfunction. Whereas it's like, well, you know, like I'm like a nine out of 10. It's like, okay, you've just got a little tiny bit of mitochondrial dysfunction.

So that's just a little sidebar there, but like, you know, how applicable is this to a person? And if my patients come in saying like, yeah, I've got like, you know, joint pain and I've got headaches and I've got, I don't know, tremors or something like that, but my energy's perfect.

It's like, well, we're probably not dealing with mitochondrial dysfunction issue. We're probably dealing with something else. This is Doctor Talks, real talk from real doctors on the issues that matter to you most.

Hello, welcome back to the Integrative Health Podcast with Dr. Jen. Super excited today. We're going to be talking all about mitochondria and mitochondria health, which is the key to everything energy.

You have mitochondria everywhere. Really excited to talk today to our guests. Dr. Raid, he is a graduate of the Canadian College of Naturopathic Medicine, CC, and his practice focuses on persistent paralysis and co-infections, mold illness, integrative oncology, the biomedical treatment of autism, pans and pandas, neurological disorders, SIBO, chronic pain, and treatment-resistant conditions.

He utilizes a wide range of tools, including ozone therapy, prolotherapy, peripheral injection therapy, low dose immunotherapy, IV therapies, neurofeedback, and many others.

Dr. Ray lectures on topics related to complex chronic illnesses around North America, and he also offers an in-depth online course for patients and their caregivers to help navigate the oftentimes confusing waters of chronic illness.

Thank you so much for being here. Yeah, so before we kick off the mitochondrial talk, I would just love to know how you got started, not only in naturopathic medicine, but in treating probably the most complex and hardest patient population.

Yeah. Well, the, I guess the brief history is that I had a lot of chronic health issues myself. Uh, once upon a time, a lot of chronic digestive issues when I was a teenager, you know, went to my family doctor.

You had no sweet clue of what to do for me. Eventually I found a naturopathic doctor myself and, you know, got some help there, but then. just really propelled me into learning more and more about, yeah, supplementary and alternative health options, and eventually found my way into naturopathic school.

As far as getting involved with working with folks with complex chronic illness, kind of just fell into my lap as well. After my first year of practice or so, I had a patient who came in, she said, yeah, I got Lyme disease like a year ago, and I've just never been the same since then.

And so I started looking into it, it's like, oh, there's this whole chronic Lyme thing slash persistent paralysis thing. Never heard of it before. Didn't know anybody in my province here in Nova Scotia up in Canada where I practice who, you know, knew much about it.

Dr. Raid's Path Into Complex Chronic Illness

And so I was like, well, you're kind of stuck with me. I said like, I'd refer you to someone, but I don't know who to refer you to. So I started hitting the books and so thankfully made some good headway with her.

And then that just kind of propelled the journey into like, you know, working with folks with chronic infections. Then that led into mold illness. Then yeah, just gradually developed a reputation for helping folks with really persisting health issues.

And now that's what I, that's what I treat all day. Yeah. And it's kind of funny because when you're opening a business, they tell you to niche down and just focus on one thing.

And I remember, gosh, eight years ago, I was talking to one of my mentors and I'm like, but how can you do that? Because it's all related. They might come with a hormone problem, but then they have chronic mold and Lyme.

it's yeah it's really important that when you're looking for someone out there to help you navigate all of this that they are looking at the whole picture and they're not just you know looking at the tree they're looking at the whole forest and sometimes that's hard to find yeah I was given the same advice in naturopathic school 16 years ago now.

And when I hear folks talking about niching down and it's like, when students come to be mentored by me, I just give them the opposite advice. Like, no, learn everything about everything and treat everything.

Cause it's all interrelated. Granted that takes a lot more time and effort. So, you know, I thankfully don't have a social life. So it's made it a lot easier for me, but yeah, it's a, yeah, better.

I think better to know everything about everything. If you, if you can, it's a lifelong journey. Right. I'm kind of going like at it the wrong way, too.

Well, so I came from emergency medicine where, you know, you're the jack of all trades, which is great because it gave me a good background for integrative medicine.

And I was more of a generalist integrative medicine doctor in Ohio. And that was great because I learned about everything. And now I'm trying to go backwards and niche down more into perimenopause, but more of like a marketing tactic.

So a lot of these people do it more for market anyway it's all it's business but what we hear about is actually the patient in front of us yeah so let's geek out on mitochondria i have not had a really dedicated podcast to mitochondria so i'm actually really excited for this so can you talk about what mitochondria is and how how do they apply to our energy levels and our health in general Yeah, so basically every cell in the body, except for red blood cells, so every other cell type in the body have mitochondria.

And sort of a visual depiction or visual construct to think of is if you pictured a watermelon that was just full of like just tons and tons and tons of seeds, like literally like tens of thousands or hundreds of thousands of little tiny seeds, i.e.

the most annoying watermelon to eat on the planet. every one of those seeds would be a mitochondria, or a mitochondrion is the singular. When you look in a cell biology textbook, you know, you'll see the picture of the nucleus and, you know, the endoplasmic reticulum, the cell membrane, all these things, and they'll usually draw like maybe between one to ten, you know, token mitochondria, but there's actually, you know, tens of thousands of some cell types actually have a couple of million mitochondria per cell.

So they're really, really, really, really, really important. And so as you mentioned, the mitochondria make energy for our cells. They basically take the energy from the food that we consume, you know, glucose being the main substrate.

They can use amino acids or protein building blocks or fatty acids from the food, from the fats that we consume. And they basically turn that into usable cellular energy known as ATP.

And ATP is essentially the energy currency of our cells. So it takes energy from our food and turns it into ATP. To take it one step further, and I just, I'm fascinated by this, the subject, but like what I think is like pretty cool and kind of meta is that really it's the energy from the sun is converted into plant food.

And then we either eat those plants for energy or we eat the animals that eat those plants for energy. And then that's converted by the mitochondria into ATP.

So it's kind of cool that like, I think anyways, that we're taking the sun's energy, ultimately turning it into ATP. So, you know, thank you Mr. Golden Sun for that ATP and the grand scheme of things.

That's pretty cool. What are some of the organs that have really high mitochondrial content? Yeah, so the highest density of mitochondria are in our brains and our muscles and in our livers.

So those are the most energy-demanding mitochondria, or energy-demanding tissues, I should say. And it's, I think, quite interesting because our brains only take up approximately, I believe, about 2% of our body mass, give or take.

Our brains are approximately the size of our two fists together, only take up about 2%. Yeah, it's a good-sized brain. use of the 2% take about 2% of our body mass yet used approximately 20 21% of all of our energy.

You know, the liver, I don't remember how much body mass the liver takes up, but you know, it's not not, you know, the biggest organ in the body is a good size.

But that uses up about 20% of the energy and the muscles, of course, we have lots of muscle through our body, hopefully lots of muscle because that, you know, helps to promote our longevity and our, your health span and all these good things.

The muscles, amazing. And of course, you know, you can do things to enhance your brain, but you can't grow your brain bigger. You can't, you, you don't want a big liver, a big liver is, you know, not, not good, hepatomegaly, no bleno.

But of course we can grow our muscles, you know, increase the size of them. And therefore that's one way we can increase our mitochondrial density. But I think it's interesting to think about which tissues in the body, i.e.

brain, liver, muscles, use up the most energy because it does really speak to the importance of those tissues. We all know how important our brains are.

We know how important our muscles are. You know, livers, yes, they detoxify, but they do so many other things as well.

What Mitochondria Do and Why They Matter

So just when we kind of take a step back and think like when you're working with a functional medicine doctor or a naturopathic doctor or someone in that space, You know, what do we talk about all the time?

And it's, you know, like exercise. We want to have like, you know, good muscle density. We talked about promoting our detoxification pathways, which is more than just our livers, but that is a big, big part of the detox side of things.

Then of course, you know, we want to preserve our brain health and it really translates into a kind of alludes to the importance of keeping our mitochondria happy and healthy.

Because when we get to a certain age, you know, one of the things that we start to, you know, maybe become

more concerned about or have on our minds health-wise when we maybe approach the tender age of 55, 60, 65 is, you know, different neurodegenerative conditions like Alzheimer's and Parkinson's and conditions like that.

Keeping our mitochondria nice and happy and healthy throughout our lives will hopefully set the stage so that we are going to be less prone to those types of, you know, very devastating neurological disorders.

Yeah and what I think is interesting is you're talking about brain and dementia and that's one of the diseases that scare people the most. You know not cancer but actually like getting dementia like if you ask the older population and this is something that we could help by decreasing inflammation but also helping our mitochondrial health right and keeping our mitochondria happy and healthy because they can age faster if they're, you know, they take a hit.

So what are some things that can cause stress on the mitochondria and interfere with mitochondrial function? So, I mean, the kind of general answer, kind of the mnemonic that I think of is anything you've ever heard about that's bad for you is bad for the mitochondria.

So heavy metals, bad for the mitochondria. Synthetic chemicals like pesticides, herbicides, things like glyphosate, plasticizers, artificially scented products that have phthalates in them, etc.

All those things bad for the mitochondria. Chronic viral infections, chronic bacterial infections like say Lyme disease or Bartonellosis or Anaplasmosis, different things like that.

Mold toxins are bad for our mitochondria. So really, excessive stress is bad for our mitochondria. Nutrient depletions are bad for our mitochondria. So really, anything you've ever heard of that is bad for you, it's probably bad for the mitochondria either directly as a direct toxin or it's going to in some way interfere with mitochondrial function.

Even when you think, you know, hear about things like say chronic digestive issues like say SIBO or LIBO or yeast overgrowth or parasites or things like that.

These are things that can have an indirect negative impact on the mitochondria by interfering with your nutrient absorption because the nutrients need or the mitochondria rather need tons of different nutrients in order to function properly.

Hormone imbalances, we talk about say thyroid hormone it's like well thyroid hormone incredibly important for energy levels metabolism you have so many different functions in the body keeping up your body temperature properly etc well the thyroid hormones really just tell the mitochondria in certain cells when to make more energy so really like the the thyroid hormone isn't actually making more energy for the cell it's not you know ramping up your metabolism just by some virtue of the hormone itself it's because it's telling the mitochondria to make more energy in the muscles or the brain or wherever it happens to be.

So yeah, really so many things can have a deleterious effect on the mitochondria if they're, if they're present or not, not in balance in the body. Yeah, so that's hard, right?

So people listening out there, they're like, well, I don't have energy. How do I know which one of these factors is at play? And this is where, you know, looking at root cause medicine and, you know, viruses, the environment, just the whole picture is really important, right?

Incredibly important, yes. Yeah, what about blood sugar balance and insulin resistance? How does that play a role with ATP and mitochondrial function?

Yeah, so glucose, i.e. blood sugar, like it really is the preferred substrate for the mitochondria. So that's what mitochondria can use the most easily to make energy.

Yes, we can burn amino acids. Yes, we can burn fats as well, but it's a more challenging process, more energetically demanding in order to do that. So the mitochondria really like glucose the best.

And so when we have issues with insulin resistance or when there's less efficiency of the ability of sugar to actually get into the cell, that's actually going to deprive the mitochondria of their favorite substrate in order to make energy.

Furthermore, when there's insulin resistance, that's typically associated with more inflammation in the body and a bunch of other downstream negative manifestations that are ultimately going to put more stress on the system, which again, excessive stress, that's not just mental and emotional stress, but also physiological stress is going to negatively impact the mitochondria.

And then when there's more inflammation, then A, the body's kind of wasting energy or spending energy in order to deal with that inflammation. But it's also going to contribute to more oxidation in the body, more cell damage, more peroxidation of lipids, which include not just the cell membranes, but also the mitochondrial membranes.

things start going to heck in a hand basket, you know, pretty quick. So very, very good to keep those blood sugar levels on track, which again, another plug for more muscle mass equals better blood sugar regulation as well amongst healthy diet and other things.

Yeah, I'm all about the muscle mass and lifting for women and all that stuff. My daughter was asking about Pilates and she was like, what about that? Is that good?

I'm like, well, Pilates is good for core strength. Sure. Yeah. So there's a doctor, he's a PhD researcher named Richard Navio, and he coined the term the cell danger response.

And so he's written a bunch of papers on this and done lots of research. And he's like, he's the man when it comes to like the complex chronic illness world, because His cell danger response model really helps to explain a lot of what we see clinically and physiologically in these patients.

And so when there's a chronic viral infection, it basically puts the cell into a stress mode. It kind of, you know, the cells say, you know what, we've been virally infected.

We need to batten down the hatches. We need to just kind of go into like, it's almost like we're in like a nuclear fallout shelter or something like that.

So we're going to like slow down the methylation cycle, going to slow down ATP production. We're actually going to send ATP out of the cell into the bloodstream where we really don't want too much of it.

Causes of Mitochondrial Dysfunction

And that's going to actually act as a danger signal telling the other surrounding cells that like we are in trouble here, you know, slows the metabolism down, really tells the cell to like kind of go into like a low power mode.

And the idea there is that you want to the idea there is that the cell wants to not produce what's to turn down the production of resources that the virus might want to tap into so it can replicate itself more easily.

And so it's kind of like you're quarantining that area until the viral infection passes, because this mechanism, to my understanding, was really developed as a defense mechanism to deal with an acute virus, because our bodies are used to just saying, like, we can handle this virus.

We're going to be maybe sick for a few days, maybe a couple of weeks at most, and then problem solved, problem's over. Unfortunately, when there are these really persisting viruses like EBV that have become very good at learning to persist in the body, in some cases when the situation's right, usually when there's some comorbid factors, which I'll get into in a minute, then that strategy really backfires and it's like, oh no, I'm stuck in this low power mode for months.

years, decades in some cases, and then the patients really kind of up the creek. They sort of have put their eggs in maybe the wrong physiological basket.

And so this cell danger response is something that helps to explain how many of the chronic symptoms that can arise from a chronic viral infection manifest in the body and then you can see how there'd be a really notable negative impact on the mitochondria because that energy production knob has really been turned down.

In terms of treatment, what I found personally, and I've heard a number of colleagues say this, including folks who put themselves out there as EBV experts or chronic viral experts or viral infection experts, is that if we just go after the virus, we're oftentimes really going to miss the mark.

And I can say from my own personal experience, you know, I've had many, many patients, we do lab testing, we find evidence of, you know, chronic EBV or EBV reactivation.

Sometimes there's other viruses afoot too. like cytomegalovirus or Coxsackie viruses or HHV6 or HHV8 viruses. And then you mentioned long COVID, which unfortunately we don't have a great test for that, but clinically we can kind of tell us like, oh, I got COVID and never got better.

Kind of tell clinically when we put those patients on antivirals and that's kind of our main tool. It works out sometimes, but oftentimes it doesn't. In many cases, we need to support the mitochondria, we need to bolster the immune system, and we need to treat some of those comorbid factors that I alluded to that were maybe in cahoots with the virus or the virus and these other comorbid factors are playing off of each other.

Hands down, the most common one that I see is concomitant mold illness. Folks who are living in mold or have a past history of mold exposure Because when we're exposed to mold, there's some compelling evidence that that mold can potentially colonize our sinuses and stay with us.

Maybe a person lived in a moldy house like 15 years ago, had no problems with it, and then they got COVID, and then now they have long COVID. Yes, it could be the long COVID itself, but it could be that the COVID plus the mold colonization has led, they're playing off of each other, and now the patient is experiencing all these symptoms.

treating with the antivirals and supporting the immune system, all that, but it isn't until we actually treat the mold that's now been kind of activated in their system that that's what gets them better.

So the treatment for these viruses, it can be convoluted or complex because there can be several moving parts in a lot of cases. Yeah it makes it a tricky situation for sure and you know some patients just don't even want to have the conversation because maybe they've heard about you know multifactor and they're like I just I don't even want to know because I can't afford to move or remediate or whatnot.

You know with that being said you know I typically counsel those patients saying that you know it's I think it's better to know because then we know what The problem is, um, and then it isn't to say that we can't do things while you're still in mold.

Now, no, don't get me wrong. You know, if someone's got like, you know, toxic black mold, you know, stachybotrys or chatonium, like some of these nastiest species and they're just, it's like eating through the walls of their house.

It's like. I don't know if we can really do a whole lot to help that person in that situation, but if it's more of like a, you know, maybe a less dire situation than that, I've certainly seen significant health benefits when, you know, we start bringing in binders and nasal sprays and start doing some things to try to treat the environment like ultra HEPA filters and essential oil diffusers and different things like that.

Like we can, we can still move the needle or at the very least stabilize on a lot of cases. So it is very case dependent, but yeah, there is a big stigma.

So you were saying you were talking about what you do when mold is a problem and there's other things that you can do if they can't get out of the mold yet.

Yeah, we can kind of damage control if they're still stuck in molds. And if it's not too, too dire of a situation with the molds, bringing in things like nasal sprays, like antifungal nasal sprays and binders and detox supports and helping to try to damage control their environment with ultra HEPA filters and essential oil diffusers and things like that, folks can still start feeling better or at the very least stabilized in a lot of cases.

So it's not to say that, you know, they have to move or do extensive remediation, you know, immediately or, you know, before we can make any headway in a lot of cases.

So it's oftentimes not as dire as the patients think that it might be in my experience. Yeah. And the ultimate goal is removal from the mold. But if they can't, then you can do some things to support the immune system and, you know, do the best, like you said, damage control.

Yes. Yeah. Now, what are some solutions to this? So we went through a lot of the causes of mitochondrial dysfunction. What are some things that patients can do to help support their mitochondria?

Yeah. So as far as supporting the mitochondria beyond removing the causes, as he said, would be working to help, to make sure that the mitochondria have all the ingredients that they need in order to function properly.

So the mitochondria need basically every B vitamin you can think of. Um, you know, I don't know if folks think about this necessarily. It's like, Oh, you know, take a B complex or get B12 shots.

Cause I want to, you know, help my energy levels. Like why? Well, cause they're necessary for the mitochondria to work properly. There are other things those nutrients do too, but one of their big roles is to help the mitochondria work properly.

So, you know, every single B vitamin is necessary, magnesium, calcium, vitamin D, certain amino acids are really important for the mitochondria like proline and taurine and carnitine, certain minerals like zinc, in addition to the calcium and magnesium I already mentioned, trace minerals like manganese, it's a cofactor for superoxide dismutase, which is a really important antioxidant that's produced in the mitochondria.

So there are a number of different nutrients that are very important for mitochondrial function. And so making sure that patients have all of those, they're not deficient in any of those is really important.

There's a formula that I've been working with for a number of years.

Blood Sugar, Inflammation, and the Cell Danger Response

It's called Mitochondrial Support Formula and it has robust dosages of the vast majority of all the nutrients that I just mentioned. And that's been a real game changer in my practice because one of the challenges that I ran into years ago was that I wanted to support my patients' mitochondria, but I found that a lot of the products that were out there that were called, you know, mitochondrial support this or mitochondrial support that, you know, I'd look at the labels and see like, yeah, it's got a few mitochondrial support nutrients, like, you know, maybe some N-acetylcysteine, some CoQ10, you know, maybe some PQQ, you know, a bit of, you know, carnitine or something.

And then it's like, but what about the rest of them? And so I found that those formulas oftentimes didn't help. But then when I looked and thought, well, I'm not going to put my patient on like 20 different supplements, you know, to support the mitochondria with everything that they need.

So I came up with a formula. There's a local supplement compounding company. They make formulas for clinics all the time. I asked them to make this formula for me for my practice.

I just want to do a trial run with this formula, try it with some patients and see how does it work if we just supplement them with robust dosages of all these really crucial nutrients that the mitochondria need.

So I recommended that my patients take this formula along with a multi-nutrient to kind of fill in some of the other

gaps. Because some of those nutrients, you don't need colossal amounts of methylfolate, for example.

I started working with this combination of a potent multi-nutrient plus the mitochondrial support formula. And lo and behold, so many of my patients started getting more energy, less brain fog, feeling a lot better.

And these were patients where we had done all this other work. We had done the mold treatments. We had done the antimicrobial treatments. We had balanced their gut microbiomes.

They're eating a healthy diet. They're exercising as best they could. But they just still weren't feeling that sense of robustness, that vitality that we were looking for.

Or in other patients where they were early into their treatment protocol, we were working with say the antimicrobial sort of their Lyman co-infections, but I wanted to try to boost their energy faster.

So I put patients like that on this formula. And while it's not a panacea for everyone, I found that the success rate was like staggeringly high. It was like, you know, 80, 90% success rate patients saying like, this stuff really helps.

Like patients started calling it energy in a bottle, which I was very excited about. So I started using it more and more, you know, started telling some local colleagues about it.

I trained resident naturopathic doctors too. So basically whatever. I do, they tend to do too because I'm training them. So they were seeing benefits, started lecturing about it at conferences.

And so now folks use it, you know, all over the place, not, you know, it's not on like, you know, the, the supplement shells everywhere or anything like that.

But there are, you know, many docs now around North America and maybe other places that are using it. And I get a lot of good feedback from folks. So that comprehensive support of the mitochondria can be a very, very effective strategy.

Now, I will say, you know, a little asterisk there is that when I recommend this to folks or when I hear feedback from other docs who say like, you know, didn't really pack the punch I was looking for, I almost use that as a pseudo-diagnostic test because what I, as we were talking about already with the mitochondria, there are so many things that can get in the way of them functioning properly.

If there's really not much standing in their way to function properly, or maybe all the obstacles have been cleared up, they just need more TLC to get them working optimally, the mitochondrial support formula can work incredibly well.

If I recommend it to a patient and they don't really see much of a change, or maybe don't see any change at all, to me, clinically, that means that there must be one or more things standing in the way of those mitochondria working properly.

So I'll say, hey, can you try this for a month? See how you feel. If it's helping, we keep it up. If it's not, we drop it like a hot potato and we say, okay, we got to go back to the drawing board and see what we're missing.

So with the mitochondrial support, like the comprehensive support of the mitochondria that I've mentioned here, it can be a very valuable treatment tool, but I also look at it as a really useful pseudo diagnostic test to see like, have I done We don't know the background work, am I missing something here?

The other thing that the mitochondria need in order to function properly is proper hormone balance as well. As I mentioned already with thyroid hormone as an example, the thyroid hormone tells the mitochondria when and where to make energy, but so do a bunch of other hormones.

Estrogen does that, progesterone does that, DHEA does that, cortisol does that. So we need to make sure we have

good hormone balance as well. So in terms of treatment options, like are the hormones looking good?

Do they have all the nutrients, do the mitochondria have all the nutrients they need to make the energy? And then have we, are there any obstacles standing in the way like the toxins and excessive stress and mold and infections and whatnot?

So that's kind of the trifecta that are required for those mitochondria to work really, really optimally. Yeah, I love all that. And it's not just a quick fix or a supplement all the time.

Like sometimes, yes, if you need to fill in nutritional gaps, but sometimes it's going through all those different causes. So I remember this patient that I had that she was just going downhill fast.

had mold that we figured that out finally, but also was impairing menopause, so was just not even able to do the mold treatment. Well, they were remediating and stuff like that, but couldn't walk into my office, basically.

It was so weak. And I'm like, you know, let's try some progesterone during your luteal phase and see if that can support your hormones while you're going through all this.

Because we tried cromulin, low-dose maltrexone, all the stuff, right? And that helped turn her around.

Supporting Mitochondria With Nutrients and Hormones

until and then we were able to detox the mold and everything so sometimes it's like finding that last puzzle piece and working with someone who like we were talking about earlier isn't niche down so much that they can't see past only treating mold by detoxing you from mold that they can look at the other things like you were talking about like maybe a supplement hormones you know maybe a vagal nerve stimulator, you know?

There's different pieces of the puzzle. So I always look back at that case and I like to tell patients like, look, like this might not be a perfect thing for you.

It might not be what your body needs. You know, we don't have a diagnostic tool that can go through and say exactly what your body needs. We haven't been replaced by AI yet, so that's good.

But right. Right. Right. Well, and I really think that there's so much emotional and spiritual component to to what we do that I don't think what we do will ever be replaced by AI.

I mean, but that's just my opinion, because I think people want that human connection. But do you have any like case studies where maybe like like my patient where you were there, they're just like it wasn't what was bright in front of you.

It was something else. And it took a it takes time sometimes. Sorry, just to make sure I understand the question well, like where you said wasn't right in front of me.

Or any cool patient story with mitochondrial that just, I think people listening, maybe they could resonate with some of these stories because it doesn't, mitochondrial issues, they're not what you think they are.

And they're basically, they're everything. So. Yeah, I've got a couple little examples I can give here for sure. I've got many, but I'll give a few. So one of the litmus tests that I have to know, like, does somebody have mitochondrial dysfunction?

Because I kind of mentioned how if we're comprehensively supporting the mitochondria and that doesn't move the needle as much as we like it to, it means there's probably something we're missing.

But how do we know in the first place, do the mitochondria need support? And unfortunately, to my knowledge, there really isn't a perfect test to assess for that.

There are tests that can measure certain elements of the mitochondria. With some of those tests, it's really debatable whether how useful those tests are, how reproducible they are.

So my favorite test is what I call the looking at yourself in the mirror test, where if you look in the mirror and you ask yourself, do I have perfect energy?

And if the answer is no, then you've got mitochondrial dysfunction. It's cheap, it's easy, do it. I mean, we probably all have mitochondrial dysfunction.

Yeah. Well, maybe. And so the degree to which we feel tired is, I believe, in my opinion, a linear proportion to our degree of mitochondrial dysfunction.

So if someone says like, man, I can't even get up off the couch to look in the mirror, well, they've got really bad mitochondrial dysfunction. Whereas it's like, well, you know, like I'm like a nine out of 10. It's like, okay, you've just got a little tiny bit of mitochondrial dysfunction.

So that's just a little sidebar there, but like, you know, how applicable is this to a person? And if my patients come in saying like, yeah, I've got like, you know, joint pain and I've got, you know, headaches and I've got, you know, I don't know, tremors or something like that, but my energy is perfect.

It's like, well. We're probably not dealing with mitochondrial dysfunction issue. Like we're probably dealing with something else. So in terms of a couple of case examples, I had this one patient, she, I started working with her probably, you know, my second, third year of practice.

This is, you know, 13, 14 years ago. And she, we did like every new thing I learned is I'm a, I'm a course junkie. I'm like always learning new things, you know, traveling around.

I've been to like more courses and trainings than I could shake a stick at. And so with her, like every new thing I learned, like we would try it with her because we had figured out her gut issues, which was wonderful.

And we, you know, figured out her headaches, which was wonderful, but we just could not, like try as I might, I could not get her energy levels cracked.

Like she was, I think we got her up to like maybe a six out of 10 and like we could just not, could not get her above that level. And so, you know, treated her for mold and Lyme and co-infections and heavy metals and did like just.

whole bunch of other different treatments over time, tried a bunch of different supplements, some of the like partial mitochondrial supports that have like just a few ingredients in there for the mitochondria, tried tons of different stuff and I just could not move the needle.

Put her on the Comprehensive Mitochondrial Support and that's what cracked the case. That was one of the first cases that I, she was one of the first cases I recommended it to because she was She was my guinea pig, you know, my very, say that very affectionately.

She was a game for like anything that I threw at her. Bless her heart. And yeah, she was just like, yeah, she was doing great. Like, you know, within like a month she was like, yeah, like at eight, nine out of 10, like just doing really well.

So that's, you know, great example, I think of a patient where like they tried everything. Like all they were missing was like that mitochondrial support.

I had another, I had another patient who she had Lyme disease, you know, got on some antibiotics, like pretty much right away and didn't really help, unfortunately.

I, you know, had the bullseye rash or anything, patho-pneumonic, we knew she had Lyme, but the antibiotics just

didn't really help. Came in to see me, put her on some herbs.

After about a month, she was starting to feel better, but like it was pretty slow. Then the main symptom that was holding her back was her low energy levels.

put her on some mitochondrial support, followed up with her a month later, and her energy levels had skyrocketed right back up to where they were before she got sick.

So, you know, in her case, it was a good example of, you know, yes, we're working with the treatment for Lyme, but, like, her mitochondria seemed to have really taken a hit as part of that process.

So it's something where, you know, we can use comprehensive mitochondrial support to kind of crack those really persisting cases, but then it can also be used as an adjunct even in the earlier days of something like a, you know, a Lyme case or a mold case or whatnot.

And then maybe just the third little vignette that I'll mention here is for folks who are listening being like, well, thank goodness, I don't have complex chronic illness, but how might this apply to me?

So just using myself as an example, very healthy, I follow a very healthy diet, exercise regularly. Yes, I'm too busy. Yes, I have too many children at home.

Yes, I have too many patients at work, too many side projects. So yes, I'm overextended, but generally very, very healthy. And I felt like I was feeling good, but like, well, I'm going to try this stuff on me.

And like, like 10 out of 10 energy, like all the time, like I don't get the afternoon yawns. Like I don't get the slump. Like I can go until, you know, 10, 11 o'clock every night, you know, can ask my wife.

It's like, how does he have the energy to like do all these projects and things like that on the side? So even for folks who are generally healthy, and I'm not the only healthy person I've recommended this to.

I have some patients who, you know, I have a small subset of patients who are biohackers. They're like, yeah, I'm feeling good. I just want to feel as good as possible.

The mitochondrial support formula, like it very regularly takes folks who are already at like, you know, an eight, eight and a half, nine out of 10. And they're like, yeah, I'm like a 10. I feel really, really good.

So it's a, it's a very exciting thing to be aware of, not to say that it's like, oh, we just all want to take supplements to be supporting mitochondria.

It's all the lifestyle stuff, all the diets or all the exercise stuff, et cetera. But it can be a really useful adjunct even for folks who are already feeling really good and just kind of want to feel, you know, as, as good as possible.

Yeah, and that's the key. If you're doing everything right, but you are still having energy issues. We're not talking about if you eat donuts for breakfast, a sandwich for lunch, and take out for dinner, you might not have good mitochondrial energy.

Yeah, but also supplements to support the whole mitochondria, the ATP chain, the electron transport chain, all of that, that still is going to help you move off a little.

I think that it's so interesting to talk about that and I love how you gave everyone that test. I think I might use that. When you look in the mirror, what are your energy levels?

I think that is great because we should have energy. I remember when I was in the thick of Hashimoto's and in medical school and stress, so that was mitochondrial disaster.

you know, I feel better in my 40s than I did in my 20s. And that's for real, I really do. And also we didn't have time to go into things like red light therapy for mitochondria and stuff like that, but there's a lot of low hanging fruit that we can do also.

And then of course, work with a functional, integrative, naturopathic doctor because they're going to guide you.

Patient Case Studies and Practical Takeaways

So that way you're not just stabbing in the dark, you know, like what's the best thing. Preferably, yeah, it's nice to have a guide along the way, for sure.

For sure. So tell us a little bit about where to find you. Also, you have a course on navigating these chronic illnesses, because sometimes I think that that is the hardest thing.

You know, how do you navigate this, especially in a conventional world? I know our health insurance is a little bit different in the US than Canada, but for everyone, it can be very confusing.

when you have, you know, you have this hunch and a lot of people do, they, you know, they come to you, they come to me and they're like, I know something is deeper, something is wrong.

So it's really hard when you have a chronic illness to navigate. So we'd love to know all where to find you. Sure. Yeah. Thanks for asking. Yeah. So maybe three or four years ago, I put together this course called, um, overcoming chronic illness, which is the same name as my podcast as well.

I have a much, you're generous enough to chat with me the other, the other week about that. We had a great chat. So, uh, yeah, my course is called overcoming chronic illness.

And as you kind of alluded to earlier, you know, some folks they're like the mold specialist or the lime specialist or the heavy metal specialist or the SIBO specialist.

And. Like, what if you have all of those things? So I created this course because quite frankly, many patients have multiple issues going on, you know, it's overcoming chronic illness.

It's, or sorry, complex chronic illness, I should say is the name of the course. So it's complex because yes, it's complicated, but also because there's multiple parts.

So with the course, there's several modules. There's, you know, the gut health module, there's the heavy metal and other toxins module, the mold module, the chronic infections module, the histamine issue module.

Maybe one or, oh, there's a mitochondrial module, of course, because I'm obsessed with mitochondria. Maybe one or two other ones that I'm forgetting off the top of my head.

So within that course, it goes through, like, how are, we talk, I talk about the different topics, but then how they interrelate with all the other ones.

Course, Resources, and Closing Remarks

And then also when folks sign up for the course, which is just an on-demand course, you just go to my mailing list, which you can access through anywhere you find me on social media, my Instagram account, my YouTube channel.

You can sign up for the mailing list. You get access to the first two modules for free to see if, you know, just try it before you buy it kind of thing.

But then if you do decide to purchase the course, then you get handouts that are geared to facilitate the

conversation with your healthcare provider. So if you have a doc who's like, hey, they're savvy with mold and lime, but they don't really know much about SIBO and heavy metals.

Well, there's kind of a cheat sheet that you can bring to them to say like, you know, here's Here's some information about this. And like, these are some of the tests to consider, some of the treatment approaches to consider, et cetera.

So it's kind of geared at helping to arm the patient with more knowledge about what's going on with them, but then also to provide them with some resources that their healthcare providers can use.

Cause not everyone can, most people can't afford to work with like five or six different specialists. And you're not necessarily going to be fortunate enough to have someone who knows about all of these things necessarily.

So trying to help fill in some of those gaps with, with the course. Absolutely. I love that. And we will have in the chat, all the links for everyone listening so they can go right to that.

Thanks. All right. Thank you so much for being here, Dr. Raid. We appreciate you so much. And if you like this episode and want to share this information with your friends and family, which you really should, if they don't have 10 out of 10 energy.

So please share this podcast with your friends. So thanks again, Brian, Dr. Raid. We really appreciate you. My pleasure. Thank you. Thank you for tuning in to Doctor Talks.

We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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