Improving What Your Mom Gave You: Optimize Your Mitochondria For Unlimited Energy

Wendie Trubow, MD, MBA, IFMCP
with **Laura Frontiero, FNP-BC**

Wendie Trubow, MD, MBA, IFMCP
Hello and welcome to this episode of the environmental toxicants, auto immunity and chronic diseases summit. I'm Wendie Trubow, MD, MBA. And I'm so so excited for my guest today, Laura Frontiero nurse practitioner, she is the founder of bio radiant health and I just have to say it's the best name. She has served thousands of patients as a nurse practitioner over the last 22 years. She's literally all about working with high performing clients to boost their energy, renew their mental focus, feel great in their bodies and be productive again. And today we're gonna talk about Mitochondria, your body's secret weapon against auto immunity and chronic diseases. So I couldn't be more excited to welcome Laura because this is near and dear to my heart and your near and dear to my heart. So this is like just call it a trifecta. But what's the third part? So I'm just excited that you're here and thank you for being on the summit.

Laura Frontiero, FNP-BC
I'm so excited to support this summit and this mission. You know, I love the work that you do in the world, Wendie. I'm a huge supporter of everything you stand for and I'm one of the fortunate people that gets to see you from time to time. We were just going over our travel schedule over the next few months and I can't wait. I get to see you twice over the next so.

Wendie Trubow, MD, MBA, IFMCP
I'm always excited when we get to play. So I think you know you have a really good story, would you be willing to share your story about how you transitioned working from a nurse practitioner in the largest H. M. O. In America to then specializing in functional medicine and mitochondrial health. Like why that how did you get the,

Laura Frontiero, FNP-BC
I know it's so crazy right that everybody has a journey. Everybody has a story and it's true. I did work for the largest H. M. O. In America for 21 years. And you know, interesting is I started out in the preventive medicine department. So this is where we are trying to prevent chronic disease.

And I'm going to start out by saying that in the Western al empathic medicine world, there's some really good work going on. And so the first thing I'm gonna invite our viewers is to stop being mad at your Westerner al empathic practitioners for not giving you the answers you're looking for because they're giving you what they know.

Wendie Trubow, MD, MBA, IFMCP
The tools they have in their tool box. Right. Right. You have X. Y. Z. And we have abc.

Laura Frontiero, FNP-BC
Exactly, exactly. And so when I was giving X. Y. Z. Preventive care, it was good care but many, many years into it, I realized that it wasn't actually prevention at all. So what we were doing in the Western world is we were looking for what we call early detection. It's not proactive. It's actually looking for early disease so that you can treat it quick but it's not actually preventing disease if that makes sense. So I'll give you an example in the Western world, you know, we do ma'am and we do colon cancer screenings and we do you know, blood pressure monitoring and we do pelvic and pap exams and we do thyroid palpitation exams and we check labs, but none of that is actually prevention, it's just looking for a problem. And when we find that problem, the solution is a downstream solution, right? So we have a surgery for that, we have a medication for that. We have a but none of it is actually how to prevent the problem in the first place. And I worked in a very pretty progressive preventive medicine clinic where we were really proud of the work we did, but we didn't really have enough time to teach people how to get healthy. And we certainly never asked people about environmental toxicants.

We didn't ask people about their sleep, we didn't ask people about their new nutrition. I mean the extent of nutrition in the Western world is really, you know, eat grains, tell people all the time to eat grains, complex grains and we tell people you know, probably good idea to reduce your sugar intake because we deal with a lot of diabetes but we really don't get deep into nutrition and you have to kind of get a referral to a nutritionist who then is also kind of in the Western alpathic model of nutrition. So that really is kind of when I woke up to that and realized, oh this isn't really prevention, that's when I really wanted to learn more and functional medicine came into my life and it was, I couldn't learn it fast enough right? Integrative and functional medicine. And so today I'm really grateful for my telepathic Western experience because it positions me in a very unique place when I'm working with people in my prevent, in my true preventive medicine practice in my functional medicine practice. It allows me to see red flags when somebody does need to actually go see a Western medicine al empathic practitioner. But I'm not ever going to knock the good things that they do. It's so funny. My were I was just telling you my daughter broke her nose a couple of weeks ago, my husband just got an eye injury at work and he both of them had to go to the urgent care in the emergency room and it's perfectly set up for that, right? They got what they needed, they got patched up. My daughter got her nose reset, My husband got his eyes fixed up and thank goodness for that Western medicine model.

Wendie Trubow, MD, MBA, IFMCP
Yeah, those are the right tools for the problems that you're solving. So when you're looking at, I always say if you have a mechanical issue meaning something's broken or you have a tumor growth or you have something that needs to be removed or fixed, You're in the right space when you go to a traditional location. But if you're looking for what you'll call true prevention. Yeah, this is the wrong tool for that behavior. So how did you get interested in mitochondria?

Laura Frontiero, FNP-BC
Well, so along my journey in functional medicine, it became apparent to me. So it started out with an obsession about gut health, right? Because we all know that in order to heal the body, we need to start with gut health. And then as my journey continued, I learned something I never learned in Western medicine, which was how important mitochondria are and how important they are to health. And then, you know, I studied with this amazing human Dan Kalish for a year and he's, you know, the organic acids king, right. He teaches how to interpret organic acids and ion panels and for a year, all he did was talk about mitochondria, right. I mean it was just, we talked about all kinds of things, but he always brought it back to mitochondria. And I can remember him saying over and over again, if you don't fix this piece, you guys, if you miss the a piece, when you're looking at the organic acids test when you're treating somebody's gut, when you're working on somebody's adrenal health, when you're detoxing someone, you're going to have a really hard time getting there. And so really he opened my eyes to how important mitochondria are and then fast forward and I did the whole, I hosted the whole mitochondria summit and talked to 70 experts about mitochondria and even, you know, deepened my knowledge there. And so now I'm just obsessed with mitochondria. So I'm Andrea Lady now.

Wendie Trubow, MD, MBA, IFMCP
Yeah. Well, I mean it produces 90% of your energy. So why wouldn't you be right for everyone who's fatigue, chronic fatigue, any chronic illness, any autoimmune disease? These are the motors of health.

Laura Frontiero, FNP-BC
Oh, I love that analogy the motors of health. And they're really like, I like to say they're your life force because they're responsible for the majority of that energy production. And they're called the powerhouse of yourself for a reason. And honestly Wendy if you would've told me back when I was in high school biology class learning the Krebs cycle and the electron transport chain, which is really boring stuff. That's the high level scientific thing that happens inside of the mitochondria. And I remember in biology class hating that chapter, that segment and I wanted to get back to just using Bunsen burners and dissecting things. Right, That was way more fun. If you would have told me then that I'd be a mitochondria expert. Now I would have laughed at you because that was probably the section of the test that I did the worst on because I mean regurgitating science is boring. Right?

Wendie Trubow, MD, MBA, IFMCP
Well, it's also there's no, I remember in biochem and med school, I almost failed it because I I need contact. So I looked at the instructor, he he's tutoring me, right? The head of the department is tutoring me because I'm like, I'm a mess here. I don't know. I said, where are we in the body? Like give me just give me a map orient me because this is not making any sense. And he said, oh, we're in the mitochondria. I was like, thank you. So, for our listeners who might not be as up on mitochondria, you know, like I love mitochondria, you love mitochondria. But for the listeners, can you give sort of a primer, what are they, where are they and and what are they doing around our health?

Laura Frontiero, FNP-BC
Yes. And this is really important to this discussion about eliminating or or avoiding chronic disease, eliminating or avoiding autoimmune disorders. And it's really important when we're talking about environmental toxicants as well. So I'm really excited to be somebody on this summit who gets to unpack this for everyone. So listen up because this is mission critical for your recovery process and your prevention process, right. Whitney?

Wendie Trubow, MD, MBA, IFMCP
Yes, the quiz. The quiz is in how you feel every day. So you don't feel like a million dollars then, you know, you're getting a D minus on the quiz. And this is where it makes a difference.

Laura Frontiero, FNP-BC
It is. And if you aren't addressing your mitochondria health, you're gonna keep getting a d minus you can you you can do everything right? I mean, I talked to people all the time who say, but I exercise and I sleep and I eat healthy and I still don't feel good. And so we get down to what's happening at the cellular level. So it all comes down to cellular levels. So mitochondria are little tiny cellular organisms. They actually live inside of ourselves. And without getting over scientific, I'd rather talk about what they do and why it's important. So I this is a Lauraism but I like to explain energy as physical energy and invisible energy. So the physical energy is kind of what you feel each day. So when you get up for the day and you're faced with your day and you're looking at your list of things to do. Do you have the physical energy to carry that out? Or do you feel like you have to take naps throughout the day? Or is the brain fogginess setting in? And it's making it hard to focus? That's kind of the physical thing that we feel.

But then there's this whole invisible energy force that's occurring inside of our body that your mitochondria are also responsible for. And by that, I mean, the things you don't notice. So your heart pumps and your lungs breathe and your GI tract digest food and your body makes enzymes and neurotransmitters and hormones and all of these processes are going on that's kind of invisible to us we don't think about it but it's happening. And guess what who what in your body is driving all of that. What in your body is sending the messages to your nervous system, to your gi track to your immune system, to your brain, to your lungs, to every part of your

body, it's your mitochondria. So the thing that mitochondria do is they produce this unit of energy called a teepee. And I want you to think of a teepee like currency like money and it costs a certain amount of a teepee to do every function in your body. So if I were to get up and walk across the room and out the door to my right, that would take let's say let's just arbitrarily say 100 units of ATP. Energy. But me just sitting here talking to you for 60 seconds maybe that takes 10 units of a teepee energy. And you know some smart scientist somewhere can tell you those exact numbers. But the point is that you need a teepee energy for every function in your body. Whether it's just sitting here digesting food and talking or whether it's physically getting up and doing something so that certain amount of ATP Is required for healing your body from chronic diseases. So you're gonna have a bigger spend out of your A. T. P. Bank account if you have a chronic disease if you have a autoimmune disorder if you have any kind of chronic thing going on. So you're gonna need to make more to replenish that bank account. So I'll just pause there.

Wendie Trubow, MD, MBA, IFMCP
Yeah there's a lot to unpack there Laura. So the first thing we didn't talk about is you really can blame your mother for this because mitochondria are maternal lineage. Actually when you're when those cells get fertilized when you are created there is paternal mitochondria but they get destroyed as the cell develops and so you and I all of us have it's extra exclusively maternal. So you will see illnesses that flow through the maternal line of things because their mitochondrial linked which I thought was so interesting. And there you also didn't mention that I just thought was so cool if they're independent they were initially independent of us. But back when we were much simpler evolved to be symbiotic. So they can't live without us and we can't live without them. But they are truly independent of us. They have their own D. N. A. They produce their own they do their thing but they rely on us for the minerals and nutrients that they use. And to even expend the energy. So I just thought that was fascinating.

Laura Frontiero, FNP-BC
It is they rely on us we rely on them and it is all about the evolution of the human body. And so yeah they are their own entity so to speak.

Wendie Trubow, MD, MBA, IFMCP
Talk to me about some of the environmental toxicants that people could be exposed to. That then lead to mitochondrial dysfunction.

Laura Frontiero, FNP-BC
Yeah, this is one of my favorite topics to talk about because you and I both know we cannot get people well unless we actually address the environmental toxin piece. Like we mentioned earlier, you can sleep, you can eat healthy, you can exercise, you can drink water but if you don't help assist the toxins that are in our body and it starts off with what's given to us while we're in utero with our mother. So she not only gives us our mitochondria, she gives us our first load of toxins as well. So I'm sure and if you're the first born then you have an even higher load than your

younger siblings. So it starts there mom offloads. And there's even a theory that the fetus is used as an offloading space for mom to get rid of some chemicals. It's crazy. I know it's hard to think about that as you that face but so it starts there and I'm sure you have because the topic of this summit is all about toxicants. I'm sure many, many people are using the analogy of the toxin bucket that we have in our body and once that bucket gets overflowing, those toxins have to go somewhere. So the bucket gets full and things started falling. I also like to think of a bathtub where water's pouring in but the plug is clogged and it can't get out as fast as it comes in so then it ends up overflowing onto the floor and getting everywhere. So that's kind of what's happening in your body.

Toxins are over flowing and they're getting into ourselves intracellular spaces. Your body is rapidly trying to pack these away and safe in a safe space away from your brain, away from your lungs, away from your liver, away from your pancreas away from your vital organs. So of course it gets packed into fat tissue. But to answer your question, what is coming in, I mean you name it everything from heavy metals to mold and mycotoxins to industrial toxins, you know waste that is created due to big industry, it's in our air, it's our water, it's in the food, we eat, the pesticides and herbicides that are used during food production, even the skin products that we use every day, our makeup, our toothpaste, our deodorant, our cleaning products are off gassing of the furniture in our house and our flooring and our paint. I mean you can't escape it and I mean I know I'm preaching to the choir here and I know everybody's talking about this on your summit and you have a whole book about it that's right behind you on the shelf and you and I have had lots of discussions on this, I mean you are the toxin expert Wendy so all of the unfortunately right because it was all about my your own health, right? And so all of these things, guess what they are flat lining your mitochondria 80 P production as well.

Wendie Trubow, MD, MBA, IFMCP
So let's dive into this though because so for the people listening what happens is you get exposed to something and your body has to deal with it. But the process of dealing with it stresses the mitochondria because they need to make more energy in order for you to actually clean your house basically. So now do that at 1000 X. Because you've got a major toxic exposure when you strip the lead paint out of your house or you use V. O. C. Paint or you rip something out or whatever. You know you eat non organic food. Now you have this ongoing onslaught that just keeps challenging the system.

Laura Frontiero, FNP-BC
Yeah. So the first thing that happens is this what we call metabolic instability. So as the mitochondria are functioning that function declines. You get this lowered energy production. That's your ATP bank account that we already talked about. And because they're not functioning well you get this increase in metabolic waste so your cells are releasing damaging free radicals and waste that needs to be carried away through your detox pathways. But guess what? Your detox pathways are already overloaded with toxicants. So now you get this increase in what we

call oxidative stress and I'm sure that your audience is pretty savvy and has heard about oxidative stress being damaging to your cells. And then you also get this lowered antioxidant production. So antioxidants are important for our cellular health. This gets lowered and then eventually we're talking about a cascade here. Right? So you get, the first thing that happens is metabolic instability. The next thing that happens is metabolic inflexibility. So the dysfunction increases and what metabolic inflexibility is is the inability to respond to a metabolic demand and choose the best fuel source. So ketones over glucose and our mitochondria make energy from the food that we eat in the and they use either the ketones or the glucose. We do better when we burn ketones. So fat is ketones we're more efficient. So think about your car and your engine working well and think about the grades of gasoline that you can put in your car and some cars. The fancy ones require super unleaded.

That's like ketones for your body. It's super unleaded gas. It burns clean and it keeps the engine going. The glucose is more like the regular gas. Not as clean burning. Makes more waste. So we get this dysfunctional energy production and it continues to cascade. And so the next thing that happens once you've gone through this metabolic inflexibility is guess what chronic disease. So we have a name for mitochondrial dysfunction. It's called cardiovascular disease. It's called Alzheimer's, it's called Parkinson's, it's called cancer. It's called, insert any autoimmune disorder. It's called Lou Gehrig's disease. It's called muscular dystrophy. It's called epilepsy. It's called fibromyalgia. Do you get where I'm going with this? This is what is the final stage of metabolic, excuse me of mitochondria decline is chronic disease. So, at the root of it is a mitochondrial dysfunction. And so you asked earlier, why am I obsessed with this? This is why I'm obsessed with it. Because you can't reverse any of this if you don't get back your metabolic flexibility and if you don't reverse metabolic instability, which our mitochondria problems. So, I know that was a lot to unpack. So let me pause, take a breath.

Wendie Trubow, MD, MBA, IFMCP
I think it was great. So, I'm going to repeat this back to you. That the bottom line is all roads of dis health or disease, start the origin of all those roads is mitochondrial health at some level. And so if you're experiencing anything you want to look at your mitochondria, because that's the thing that's impacting your ability to get better if you've already gone down the path or it's what's setting you down the path.

Laura Frontiero, FNP-BC
So, it needs to be addressed, Right? So, you're not throwing out the importance of gut health, right? You're not throwing about the importance of adrenal health. You're not throwing out the importance of all these other pieces. But during your recovery process, mitochondria support must be included in some way. And that looks a lot of different ways. And so I know you and I both Wendy, we put mitochondria support into our protocols when people are working with us for a particular problem, we make sure we've got the mitochondria piece covered. I like to say I'm a ninja who just people don't even realize it, I'm just slipping in the mitochondria support like a

ninja, it's just all seamlessly flows with what you're doing, but it must be part of what you're doing. So make sure your practitioner, whoever you're working with is addressing mitochondria support this is critical.

Wendie Trubow, MD, MBA, IFMCP
So are there things that people at home can do on their own? Obviously I always think of it like there's two paths, one is what you can do on your own and one is what you need a senior level functional provider for. So what are the things people can do on their own that will support and support the regeneration of mitochondria and the growth and the healing that they can do in their kitchen.

Laura Frontiero, FNP-BC
Let's talk about that and let's start with the kitchen because that's where we make our food, right? So so nutrition matters and nutrient rich diet matters and I know people watching the summit are savvy, so chances are people tuning in are already eating, you know organic, they're probably gluten free, they're probably avoiding processed grains, they're probably avoiding bad fats like seed oils, they're probably avoiding dairy. So these are these things are important and I'm not saying you have to avoid dairy forever. But during the early phases of your healing process I do recommend taking out cow dairy and you know try some goat or sheep or some other alternative. Eat clean protein. So when you're eating your meat make sure that it's all the things that it's pasture raised and grass bed and wild caught and all those important things, not just pasture grass finished from beginning to end of the life of the animal that it's hormone free that it's antibiotic free and eat organ meats.

So liver, kidney heart. But these organ meats are actually really really supportive to your mitochondria. And if that grosses you out you can take it in capsule form. There's lots of companies now that make clean organ meats from often animals that are not from the United States. Unfortunately our animals are not the cleanest here. So they get these organs from animals outside of the United States where they have stricter laws and rules about keeping food clean. The next thing I would recommend when we're on the talking about food is intermittent fasting actually is a reset for your mitochondria. So when you're fasting, what happens is damaged mitochondria are purged through a process called autophagy that think about autophagy like like man like pac man, I must say like pac man going through and eating all the stuff that shouldn't be there or you can think of it like going through and dusting your house like you're dusting and getting rid of things that shouldn't be there.

And this allows mitochondria to remove damaged debris and these re accumulated reactive oxygen and nitrogen species which are bad for us, unfolded proteins. All of this stuff happens when mitochondria aren't functioning properly, so this allows you to get rid of it, clean it out. Fasting also reduces oxidative stress byproducts. It increases oxygen efficiency, it helps maintain ATP production so fast. It doesn't have to be hard. And I would say if you're not a faster, I'm not

suggesting that you go start with an 18 hour fast right off the bat. You build into it. If you feel like I'm gonna die if I don't eat breakfast by eight a.m. It's not a good idea for you to jump into an 18 hour fast right away, You've got to build it up. So so for example if your normal thing is close the kitchen down by you know seven o'clock at night whatever and you eat again at eight in the morning, extend it to nine in the morning and then do that for a week and then extend it to 10 in the morning and extend, extend and you'll get to the point where and your blood sugar will get more regulated and you'll be able to do this where you can fast for 18 hours. I mean I personally I've not eaten yet today. While we're filming this, it's just after 12 noon pacific for me. I won't eat probably until 2:00 today. And that's a regular thing for me. I've had a cup of black coffee and that's it. And that's super normal. And this is something you can do for free, right? This you can do for free. Yeah.

And so when you break your fast, make sure you're putting in really healthy food. So when I break my fast, it'll be with protein and fat and complex carbs through vegetables. But this is how I break my fast, it will give me lots of good fuel. So another thing you can do for free and you can do right now is you can move your body. So studies show that you get a 50-80% increase in mitochondrial capacity when you exercise regularly and it doesn't have to look like going to the gym. It can be whatever you want to do to get your body moving, but it helps with mitochondrial repair and you know, movement. That's low intensity without movement is considered low intensity. If you have physique related goals, then you're in high intensity exercise, right? So if your goal is to build strength, muscle endurance, then you're doing a higher intensity, It doesn't have to be high intensity to support your mitochondria. So you're saying you could just go for a walk, I would go for a brisk walk, would get your get your heart rate up right, I would get your body a leisurely walk is not going to give you as much benefit as a brisk walk, but you don't have to sprint, you don't have to be a marathon runner.

Wendie Trubow, MD, MBA, IFMCP
It's important also to put it in perspective, if someone's listening who has a severe autoimmune disease or severe chronic illness and isn't able to exercise, the the innate strain of that, you can't compare yourself to others is what I'm trying to say, which is if it's strain for you and it's hard for you, it's impactful for you.

Laura Frontiero, FNP-BC
Exactly. So I always say to people, because I talk to people all the time that have physical limitations based on their chronic diseases or, you know, people who have neuropathy and people who've had strokes and people have had all kinds of different health problems, I always say within your physical limitations. So what is movement to you might be different to someone else. So, when I say, get your heart rate up, that could look very different for you than it does for me or Wendie. So, for me it has to be a brisk walk because I can just get up and run out the door. But if I've had, you know, a leg amputation or if I've had if I have neuropathy or if I've had a stroke,

or if I have just such crushing fatigue from fibromyalgia or some other autoimmune disorder, it might look different, but your heart rate will go up. And that's the key.

Wendie Trubow, MD, MBA, IFMCP
Talk to me about some of the environmental toxicants that are impactful at getting which ones are really impactful at getting rid of and how can people start approaching this?

Laura Frontiero, FNP-BC
Yeah, I mean there's some simple, I think one of the simplest things we can do right away is to eat as much organic as possible so we can get a test glyphosate levels on people all the time. And I find glyphosate levels even in people who eat organic and that's because of cross contamination in organic food. However, it's much lower in those people than people who don't eat organic, right?

Wendie Trubow, MD, MBA, IFMCP
You're literally the second person on the summit to say this. And we're talking to step about glyphosate on the summit were having a talk on glyphosate and that's what I think. I don't know if I told you I presented on glyphosate, it's one of my pet peeves pet projects. It's kind of one of both. But so you're saying, I mean think about it if you live near a golf course or a farm or if your landscaper sprays something to make your yard nice and green, it's glyphosate. So even if you're in a planned community, I mean you don't have to eat it, you could be eating the cleanest diet ever, except it's airborne. It's in the water source, it's in the soil. So there are other ways to get exposed that people really need to be mindful of.

Laura Frontiero, FNP-BC
And because of this Wendie I take a binder every day to make sure that I'm removing I mean I have a clean lifestyle. I'm married to a landscape contractor and I live on an acre of beautifully landscaped land. Not one drop of life estate is used on our property and I take binders because I can't control when I travel when I do go out to eat or you know I don't live in a bubble. So that's something you can do for yourself to is work with a practitioner who can support you in the right kind of supplements that you can take. I think of my binder like people think of a multivitamin, it's a non negotiable for me.

Wendie Trubow, MD, MBA, IFMCP
What's in your, I feel like capital one. What's in your wallet, What's in your binder? What's in your binder? Yeah so my favorite binders are made by cell core.

Laura Frontiero, FNP-BC
These are the ones that I like to take and I like to take an all round binder that kind of helps with radiation chemicals. Mycotoxins. You know what is what am I trying to say the, the microbes that

are in my body that I'm exposed to, that create all kinds of toxins with their own cellular respiration. So I take something kind of broad spectrum.

Wendie Trubow, MD, MBA, IFMCP
And I think this is a good opportunity also to have a plug in for fiber because fiber mops up your gut, by the way, glyphosate is water soluble. So you need the binders so that you don't recycle it. But you really could just pee it out if you get it moving it'll pretty easily come out of the body if you stop filling up the pump. But the but fiber is a great binder just for micro toxins and any we release, we process like 1% of our bodies mercury every day, but we recycle like 99% of that. So even getting fiber on board is impactful totally, I'll give you one more free thing that's so important that I think we don't do enough of.

Laura Frontiero, FNP-BC
And I think that there's been a huge movement by the Western al empathic medicine community to kind of scare us is getting out in the sun. So by that I say we've been told since birth to wear sunscreen right? And to avoid the sun. And actually there, it's got to be some of the worst advice that we've ever given. I mean yeah, if you're gonna go to the beach all day, use some sun protection. But if you're gonna go on a 30 minute walk, by all means don't, I mean get your skin out there, let's don't wear sunglasses allow the sun's rays to come into your eyes? I was with a friend the other day and she said do you have did you remember to bring your sunglasses? And I don't wear sunglasses anymore. I just like oh how is that possible? Right. Because sunlight is critical to mitochondrial function and it also helps our circadian rhythm and that's a whole other topic where we could go for an hour just talking about circadian rhythm, but also vitamin D. Is important for mitochondrial function. And vitamin D. Is actually a hormone, not a vitamin and it's manufactured in our body when the sun hits the skin. And if we wear sunscreen we are not going to make vitamin D. And I tell you I I've worked in like I said, I've worked for one of the biggest HMOs in America in San Diego and I've tested vitamin D. Levels on thousands of pain in my years and 50% of san diegans are vitamin D deficient. We live in one of the sunniest areas of the country. We have sun like 300 days of the year here and we have vitamin D. Deficiency as bad as Portland. And it's because people are wearing sunscreen and staying indoors and afraid of the sun. So there's another free before you get out in the sun.

Wendie Trubow, MD, MBA, IFMCP
Thank you. Talk to me about gut health. And where do you start when you know you can pretty I would I would imagine that you can pretty easily identify like, oh you're a mitochondrial picture when someone walks in, you, you know, but you also do a lot of work with gut health. What talk to me about walking through that and why?

Laura Frontiero, FNP-BC
Yeah, so I think it's I think it's easy to say and easy to understand that the most basic level your gut processes the food and food is fuel and our digestion breaks that food down into its smaller

parts, vitamins, minerals, macro nutrients, like fat, protein, carbs and all cells including mitochondria inside the cells need these nutrients to survive. So if we are not addressing gut health, we can't get nutrients in at the most basic level. So this is foundationally one of the reasons that gut health is so important. Also there's a huge connection and we always hear about the superhighway between your brain and your gut or you know, there's now a gut vagina connection. There's a gut lung connection, There's a gut skin connection. Well, guess what? There's a gut mitochondria connection to and the middle. And it's actually more of an immune gut mitochondria connection, right? Because the mitochondria, like I mentioned earlier are sending signals and messages to your body and guess what? There's a two way communication between your mitochondria and your gut as well. That's telling your mitochondria is saying, you know, danger, danger, danger. We've got an invader here, I need the gut to get to work helping us solve this problem.

So it's really mission critical at the most basic level that you don't ignore gut health and you know, I love gut health. It's super fun. You gotta address bacterial overgrowth, you gotta address bacteria under growth. You need to address parasites in the gut. And by the way, I will just make a plug right now for if you don't address parasites, you will never get rid of toxicants in your body. And it's because parasites are a trojan horse and by that, I mean inside of a parasite is a storage tank of heavy metals toxins, mycotoxins. And it's because parasites eat these things. And so if you aren't doing parasite work and parasite cleanses along with your live detox and all the things you're doing, you're not gonna get there, it's just gonna be this hamster wheel. So definitely would say work with the practitioner who understands this piece work, you know, find people on this summit, find practitioners on this summit who can support a mitochondria who can support be gut health. And when they're looking at removing toxicants that they're also addressing things like parasites. And also say that 90% of the time your gut test isn't gonna show a parasite doesn't mean you don't have them.

Wendie Trubow, MD, MBA, IFMCP
Laura, this is amazing information. Can people harm themselves if they do the things that you recommended? I mean, it sounds like everything you've talked about is what I'll call a low hanging fruit, like you're not gonna harm yourself going organic. You might, although you might if you're super toxic, I don't mean that your personality is toxic, but if your body's toxic, you could have a detox reaction if you get super clean super fast. So notice that you know that that doesn't mean you're allergic to organic food. It means that you're having a detox reaction. It's good, it's good news. It means you're cleaning out,

Laura Frontiero, FNP-BC
Especially if you increase fiber, right? And you start increasing green vegetables because a lot of green vegetables are also detoxifying. So if you start all of a sudden eating healthy, some of these things you're eating might actually be causing a detox process. So what happens all of a sudden you're eating these natural things that help naturally detoxify your body and your immune

system goes, whoa, whoa, whoa, whoa, wait a minute we pass back those toxins away in those fat cells so that they couldn't hurt our brain and now you're letting them out and now all of a sudden you get tired, you get a key, you get right so there is a there is a moment where you're kind of like a dog circling a bed trying to find a comfortable spot and you get up again and you keep walking around in circles that can happen when you start getting healthy, it might feel like I just can't get comfortable with this. You will just keep going.

Wendie Trubow, MD, MBA, IFMCP
And I always say to people it's actually not healthy for you or safe to have rapid weight loss because you're gonna be mobilizing all your toxins and again you can have it, you can have a detox reaction. So Laura I'm like don't, you know, slow and steady wins the race quick is gonna make you sick.

Laura Frontiero, FNP-BC
Yeah, I love that, I love the alliteration, we're gonna flow, ebb and flow. In fact, you should write a book that says quick, it's gonna make you sick. Can you write that down? You are the best with book titles?

Wendie Trubow, MD, MBA, IFMCP
Yeah, our next book will be sweaty and bitchy. That's coming out. That's all about mastering the menopause and from sex. The brain function master the menopause and feel freaking amazing that's coming soon. So anyway, tell me, I know that, I know I mean I love talking to you about this and I know people listening are going to say, oh how do I find her? So how do people find you?

Laura Frontiero, FNP-BC
Well you can find me at laurafrontiero.com My name is spelled like the great friends here with an O on the end. That's my Italian husband's name, Frontiero. And on that website you can get in touch with us, you can download, you know, gut guides and all kinds of support. You can find me on instagram at laura.frontiero you can find me on facebook. I'm everywhere.

Wendie Trubow, MD, MBA, IFMCP
Awesome, awesome. So thank you so much for being on our environmental toxins, auto immunity and chronic diseases summit. This episode was all about mitochondria and your body secret weapon against auto immunity and chronic diseases. So this was really perfect and dovetailed nicely Laura. So thank you for being here and thank you all for listening.

Laura Frontiero, FNP-BC
My pleasure.