



Transcript: #494 Taking Methylene Blue for Energy and Resilience with Scott Sherr

Dr. Wendy Myers:

Hello everyone; I'm Dr. Wendy Myers. Welcome to the Myers Detox Podcast. Today we have Dr. Scott Sherr on the show. This is such a good podcast. We're talking about methylene blue and its potential to help with so many different things, with infections and with boosting your mood, with boosting your energy production and boosting your resilience and your health in general; such a good show. I always love having Scott on the show. He was on before talking about hyperbaric oxygen therapy, which he's an expert in. And so we talk about a lot of different benefits of methylene blue for jet lag, just so many different things, for boosting your brain function, and how it's been used for almost a hundred years. It actually used to be used to dye blue jeans in South Africa, and then they realized that it could be used for treating malaria. And so it was being used for a long time before antibiotics came around. It's really good for addressing different types of infections, gut infections, Lyme, and things of that nature. Really, a really good show about all the benefits of methylene blue and where to get it.

I'm going to be using it for jet lag. I'm doing some traveling this summer, which I'm really excited about, and I want something to help me with jet lag. I use my miHealth device, [miHealth bio-energetic](#) device as well, which is great for it, but I want to use something physically as well, like methylene blue. I know you guys watching the show are concerned about your body's burden of toxins; that's why you're listening. And so, I created a quiz at [heavymetalsquiz.com](#). And after you take that quiz, you're going to get your relative body burden of your toxic load, and then you'll get your results. And then, you get a free video series that answers all of your frequently asked questions about detoxification. Go check that out; it takes a couple minutes at [heavymetalsquiz.com](#).

Our guest today, Dr. Scott Sherr, he's a board-certified internal medicine physician certified to practice Health Optimization Medicine or H-O-M-e. And he's also a specialist in hyperbaric oxygen therapy. He graduated summa cum

laude from UCLA as an undergraduate and magna cum laude with Alpha Omega Alpha distinction from the University of Maryland Medical School. Dr. Scott is the founder of HOME-SF, the first HOME clinic in the US, and is also the Chief Operating Officer of Health Optimization Medicine and Practice. It's a nonprofit education company pioneered by Dr. Ted Achacoso, and the HOPE Essential Certification, plus two advanced modules in peptides in cannabis, is teaching doctors and healthcare practitioners how to detect and correct the root causes of health, not disease.

In addition, Dr. Scott is also the CEO of Smarter not Harder, the for-profit arm of Troscriptions and HOPE. And SNH is also the company behind Troscriptions, a line of buccal troches that are democratizing enlightenment by addressing the bottlenecks along the path to optimal health. They have three products on the market now, including Blue Cannatine, Just Blue, and Tro Calm. Dr. Scott's clinical practice includes HOME as its foundation, plus an integrative approach to hyperbaric oxygen therapy that includes cutting-edge and dynamic HBOT protocols, comprehensive laboratory testing, targeted supplementation, personal practices, synergistic technologies, new and ancient, and more. He has also consulted on a number of wellness projects, including Bulletproof Labs. You can learn more about Scott and his work at troscriptions.com. Scott, thanks so much for joining the show.

Dr. Scott Sherr: It's great to be back, Wendy. It's been a long time.

Dr. Wendy Myers: Yes, I know. I first met you at the Bulletproof Conference; it had to be 2016 or something like that a long time ago.

Dr. Scott Sherr: I think it was. Yeah, it was at least 2016 or 2017. Yeah, you were one of my first podcasts many, many moons ago, so it's cool to see everything circle back here. This is fun; thanks for having me.

Dr. Wendy Myers: Yes, I know. Yeah. You have a clinic, and you do a lot of really interesting cutting-edge work with your patients. And I wanted to talk to you about one of the methods you use, which is methylene blue. There's a lot of talk about this on the internet, so tell us exactly what that is.

Dr. Scott Sherr: Sure, yeah. I'm an internal medicine physician. I specialize in a field called hyperbaric oxygen therapy. And I got involved in methylene blue specifically because I have a company, a nonprofit organization as well that I help run, called Health Optimization Medicine and Practice. This is a nonprofit organization that trains doctors and practitioners on how to optimize health. It's a foundational approach, and it's got some similarities to other integrative medical training, but the difference here is that we're health-focused, so looking at optimizing the health of your cells, your gut, your neurotransmitters, your hormones, et cetera, and setting disease aside at least for the moment when you're optimizing and doing the testing. But when you're doing all that testing and optimizing people, you need to find ways to help them right now and help them feel better now, so

helping mitochondrial function was a big one of those. And so when we were looking at various types of products, and a company to start that could address some of the bottlenecks that we all face in optimizing our health, the first thing that actually came to mind to one of my colleagues who's the guy that founded the company, his name's Dr. Ted Achacoso, as methylene blue.

Methylene blue's been around for a long time, and it was first developed as a textile in manufacturing back in the 1800s actually. And then it became the first FDA-registered drug in 1897. It's been around a long time. At that point, the indication was for malaria, actually. Somehow they figured out that the same textile dye that dyed your blue jeans blue, at least back then that's what they used to dye the blue jeans blue, also treated malaria. And I don't know how the South Africans did it; somehow, they figured out that that was the case. And so it became the first antimicrobial available really until antibiotics and other antimicrobials came around in the 1950s. It was used for urinary tract infections, it was used for various types of viruses, and various fungal infections. World War II pilots were actually using methylene blue in the Pacific Theater; when they were there, they had to take methylene blue prophylactically to prevent things like fungal infections when they were in the jungles and things like that.

It was very well known, and there were songs about it because methylene is blue when you take it, no matter how you take it, IV, orally, you ingest it, or you use a buccal troche as I have at my company, doesn't matter at all, it gets concentrated in your urine when it's coming out of the system. And so you urinate out of the blue. And so you have blue urine when you take methylene blue. And so they used to have songs about blue pee as a result of that. But after the initial antimicrobial stuff was the focus, when those came on the market, methylene blue came out of favor because nobody wanted to be turning their pee blue anymore. They wanted antimicrobials and antibiotics and antifungals and things like that.

But after that, it went pretty well. The first major reason it was used is that the first drugs that were used for antipsychotic drugs were actually derived from methylene blue because methylene blue has what's called monoamine oxidase inhibition. It increases some of the neurotransmitters in our brain, like serotonin, dopamine, and norepinephrine. It gives a little bit of a mood boost as well. They were using it, and they derived some antipsychotic drugs from it. They also combined it with antipsychotic drugs so that they knew if the patient was taking their medicine because their urine would be blue, as we were saying. This is also a good party trick. This is something you'll find online. People actually will add methylene blue to various types of recipes so that when the people from their party go to the bathroom, their urine is blue.

Dr. Wendy Myers: Yeah, I have to do that at my next party.

Dr. Scott Sherr: Yeah, it's a good party trick. Exactly. But actually, the great thing about it is that there are a lot of beneficial effects to it. And over the last several decades, we

now know that methylene was a fantastic mitochondrial optimizer. Not only does it increase those neurotransmitters and help with mood-boosting as well, but there are some studies actually currently looking at it directly as an antidepressant, but there also are about at least eight different ways that methylene blue increases or optimizes mitochondrial function. And that's what really made us use it as the primary ingredient in a couple of our products at my company called troscritptions.

Dr. Wendy Myers: I read that methylene blue actually helps with your mitochondria. And so, how does it promote their function?

Dr. Scott Sherr: The mitochondria's main role for us is to make energy. And they're very good at making energy, but sometimes they have a hard time, and sometimes they need a little bit of help. And we have a lot of mitochondria. And so if you have symptoms like brain fog or fatigue or muscle fatigue when you're doing exercise, if you've had a certain virus or really any post viral fatigue or brain fog, difficulty with concentration, mitochondrial dysfunction is the common denominator for a lot of our symptomatology. And so if you can improve mitochondrial function, you can hypothetically improve a lot of those kinds of symptoms. And so what methylene blue does is it donates electrons to it. The mitochondria has something called the electron transport chain. The electron transport chain's basic function is to create a gradient between electrons on one side of the membrane and not on the other side, and then allow you to make energy or ATP your cellular currency. And so what methylene blue does is it actually donates electrons to one of the complexes. There are four, and it contributes to that fourth complex more electrons, so there's more of a gradient, so you can make more energy.

And the cool thing about it is if your mitochondria aren't working that well, say your first couple of complexes aren't working that well because you've had an infection, you have autoimmune problems, you have other types of stresses on the system, infection, as I said, inflammation, those are the main ones that I see a lot of times, then you can bypass those first couple complexes and still make energy regardless of not having working functional complexes, those first couple of complexes. It bypasses those and creates more energy. It does a couple different things as well. As a result of making more energy, it also stimulates the whole process of making energy work faster and more efficiently. It'll help start dilating blood vessels around the mitochondria that are making more energy with increasing nitric oxide. It'll help break down substrate, which is your fats and your sugar molecules in your body, and your glucose molecules to help make more energy in those areas as well. And it does this whether there is oxygen around or not because it has the ability to compensate for low oxygen states as well. For example, if you're on an airplane, it's great to have methylene blue around. It's just going to give you more oxygen, and more energy support, even if there's not as much oxygen around.

And then, on the other side of things, it's called an electron cyler methylene blue because what happens is when you make energy, you also make energy waste products or reactive oxygen species free radicals sometimes people know them as. And what the body does is it has a way to neutralize these free radicals using antioxidants. Melatonin's one in the mitochondria; you also have vitamin C and glutathione. People have heard of all of these. Methylene blue is as powerful as those three antioxidants as an antioxidant itself. And so it can protect the mitochondria or mop up some of that oxidative stress that's occurring from energy metabolism. And then, if you already are deficient in some of your antioxidants because you've had inflammation, you've had an infection, you have a chronic illness of some sort, you can help support the system in that way too. Basically, the short answer is that you're building more energy and creating more resilience at the same time using methylene blue. And then, at higher doses, methylene blue can still be used as an anti-infective in a lot of different capacities. But the lower doses of methylene blue, which is what I typically use in practice, are more for this mitochondrial support.

Dr. Wendy Myers: Yeah, that sounds like it's so, so important because the mitochondria are under threat all the time, and there are so many heavy metals and so many chemicals and other things, not to mention viral infections and things like that that really are a roadblock to mitochondrial energy production. Anything you can do is amazing. And so, let's talk about some of the other benefits of methylene blue. I'm sure there are so many. I heard it helps to boost mood.

Dr. Scott Sherr: It boosts mood by increasing some neurotransmitters, the neurotransmitters or chemicals in our brain that help us in various signaling ways in our brain itself through the connections of neurons, et cetera, in the synapsis. It increases dopamine, which is our reward neurotransmitter, increases serotonin, which helps with our mood stabilization overall, and then norepinephrine, which is our stress neurotransmitter that helps with focus and drive at higher doses, fight or flight, and those kinds of things. But the idea with mood-boosting is that it's not as powerful as some other products on the market, but it can really be a good support for those that just need a little bit of extra boost. And so I work with a lot of athletes, for example, and athletes love the mood boost that they get from using methylene blue along with whatever else they're using and doing to help optimize them. But it can be really helpful in that way.

Methylene blue is still used as a drug in hospitals and places around the world. It's still on the list of the World Health Organization's essential list of medications, actually. And the reason for that is that it has the ability to really combat something called carbon monoxide poisoning; everybody's heard of carbon monoxide poisoning. Or cyanide poisoning as well because cyanide poisoning is actually a poisoning of the first complexes of your mitochondria. And so, you can use methylene blue as an antidote for cyanide poisoning. I don't recommend anybody get cyanide poisoned anytime soon, of course, but there is an antidote for that using methylene blue. And then carbon monoxide poisoning is interesting because what happens with carbon monoxide poisoning is that the

carbon monoxide molecule binds to your red blood cells in an area. It's called your hemoglobin molecules, and it binds tighter than the oxygen can. And so as a result, the carbon monoxide molecule will bind to the red blood cell and not allow oxygen to bind. That's why people will have significant symptoms and could die from carbon monoxide poisoning because they can't carry oxygen.

What methylene can do is actually change the conformation of the iron molecule that's on the hemoglobin itself to make it so that it attaches to oxygen easier. This is not just for people that have carbon monoxide poisoning; this is actually for anybody that wants to optimize oxygen-carrying capacity. They can increase their oxygen-carrying capacity by taking methylene blue as well because it changes the conformation of this hemoglobin molecule, making it easier for oxygen to bind. And then when it gets to the cell, to the tissues where oxygen's going to help support mitochondrial function, you're going to get the dumping off of more oxygen into the tissue as well. And so you have the ability of actually carrying more and dumping more oxygen at the same time. You're improving mitochondrial function secondary to that, but the primary thing is that you're changing the confirmation of how the red blood cells are carrying the actual oxygen molecule, which is pretty cool.

Dr. Wendy Myers: I can use some of that with my brain right now, some more oxygen. Let's talk about jet lag. I've heard that it's amazing for jet lag as well.

Dr. Scott Sherr: Yeah. What it comes down to is that methylene blue will work anywhere you have mitochondria, and it's going to go to the places where you have the most mitochondria. Where are those? You have the most mitochondria in your brain, in your heart, in your liver, in your sexual organs, in your ovaries, and in your sperm. Sperm are extremely energy intensive, as you can imagine. They have a long distance to travel if they're going to do their job. And, of course, eggs are extremely high intensity as far as energy goes, to make what they do in making babies really. As a result of that, a lot of people with infertility issues, for example, have mitochondrial dysfunction. And so methylene blue could be another potential option, which is to help optimize mitochondrial function for infertility potentially, although the studies are pretty nascent in that field.

But when it comes to jet lag specifically, what's happening with jet lag is that when you're on an airplane, you're pressurized to somewhere between 6 and 8,000 feet typically. At sea level, you're breathing 21% oxygen. At 6,000 feet or 8,000 feet, you're breathing about 16% oxygen ish. And so the amount of oxygen goes down acutely. If you live in Colorado like I do, you're used to 16% oxygen all the time; it's not that bad. I think I live at 5,000 feet. I think my O₂ concentration's about 18%, compared to 21% at sea level, maybe 17%, or something like that. On an airplane, it's not as big of a jump for me to go 8,000 versus somebody that's at sea level in Mexico near the beach, enjoying the water and the pina coladas as you are, and going on an airplane, all of a sudden you're at 8,000 feet. That's a big deal. When that happens, your body goes into stress mode because your cells are seeing less oxygen. And as a result of that,

you're going to have more stress on the cells themselves and on your mitochondria.

At the same time, you're also getting the radiation exposure of being on an airplane because you're closer to the sun. And as a result of that, there's less protection, so you get more radiation. And so there's some pretty good data that methylene blue protects from radiation exposure. This is actually from skin exposure too. There are actually some methylene blue skin formulations or skin products that are actually trying to protect from UVA and UVB, for example, which are pretty interesting. Just have to make sure they're not too blue, or else you're going to look like a Smurf. But for some people, that's cool, no big deal. You're looking at radiation protection, you're looking at oxygen and energy production, and even jet lag as well. Or, sorry, even on an airplane to prevent jet lag is what I'm driving out there. Those are the main ways.

And then what I typically do is we have a bit of a protocol that we've developed at my company, as far as how best to use methylene blue in this case. Typically, my company makes something called a troche, it's called a buccal troche. It's a dissolvable lozenge that goes between your upper cheek and gum and dissolves here but after about 15 or 30 minutes. Methylene blue is actually very highly bioavailable, which means that no matter how you take it, whether it's IV, oral, when you ingest it, or in the buccal cavity, it is going to be almost a hundred percent bioavailable, which is pretty uncommon for most supplements or compounds. A good example I always give is N-acetylcysteine, NAC. NAC is about 10% bioavailable, and 10% bioavailability means that of the 100 milligrams of NAC that you took, only 10 milligrams are actually being seen by the body because the rest is getting inactivated.

Most of that inactivation is related to liver digestion. Once we digest our supplements, our capsules, and even our food, everything gets processed through the liver. And once the liver processes things, most of the time, it's going to inactivate various ingredients. And the nice thing about methylene blue is it does not get inactivated, but most things do. We made buccal troches at my company transcriptions because we were worried about bioavailability and also the consistency of effect and how fast it happens. If you dissolve it in your mouth up here, it's going to work faster. Methylene blue can be swallowed; our troches can be actually swallowed, this particular one. We have three products. This one, the pure methylene blue troche called Just Blue, is something you can also swallow. Obviously, if you put it in your mouth and dissolve it, your mouth is going to turn blue. Methylene blue is a very strong pigment, we talked about it being a good party trick for people urinating blue, but it's also going to make your mouth blue. Not everybody wants that, understandable. We like to say at my company blue is the new smart, but that's neither here nor there.

But with regard to the protocol, you can either put it in your mouth, ingest it, or swallow it. And what you want to do is want to take one. Either a half a troche or full troche about four hours before you get on a plane; the half-life is about four

to six hours. And then you want to be taking something about every four to six hours when you're flying to help really just maintain energy production, protect from oxidative stress, and then it'll also help you with recalibration of your time zones as well. The thing about methylene blue is that it can act like a nootropic and actually can act like a brain-enhancing supplement because if you have brain fog, concentration issues, or fatigue related to mitochondrial dysfunction, we're going to optimize your mitochondria, you're going to feel better, so you have an elevation in your cognitive capacity. It can be subtle for others, but it also can be quite overt in other people; it could be night and day. It depends on the person.

But anyway. It doesn't matter what time it is when you're going to your new time zone because even though you're getting mitochondrial support, it's not going to keep you up at night as well. We have another product that has some stimulants in there that's called Blue Cannatine, which has methylene blue with nicotine, caffeine, and CBD. You don't want to take that before bed, but if you want to get a lot of work done, be productive, be focused, not take some of those ADHD medications that you're getting from a friend that you shouldn't be taking or whatever, then that's an option for you as well.

Dr. Wendy Myers: All right, interesting. Really, really interesting. Any other benefits that you can think of?

Dr. Scott Sherr: Let me think here; we went through a lot. I think that what's interesting about methylene blue is that most of the studies that have been done have been done at higher doses for infection. And so, over the last decade or so, there's been more studies now in cognitive function with cognitive capacity. There are some interesting studies in Alzheimer's models, traumatic brain injury, and stroke. And there's a researcher down at the University of Texas, Austin, named Francisco Gonzalez Lima, that's done a lot of great work on using methylene blue for models of Alzheimer's, and the idea that one of the reasons why people will develop Alzheimer's is a blood flow issue. And so if you can increase mitochondrial function by giving methylene blue, this may help support people and prevent it, or at least be a treatment for early symptoms of mild cognitive impairment, et cetera. Some of the early reports were really interesting, Wendy. We had some of our users give it to their grandparents, and they were telling stories that their grandchildren had never heard of before. Basically, their memories were coming back online. Very interesting.

Then we've also had reports of people talking about joint pain going away, and chronic urinary tract infections improving, and high blood pressure also improving because there's an inflammatory aspect of symptomatology, which is quite common, and that's really a significant piece of this. As inflammation goes down, symptoms are going to get better. It could be anything from cognition to joint pain to blood pressure issues to fatigue. A lot of people in the postviral world that we are in now get their brains turned back on when they start taking methylene blue. And it's not something that we really anticipated; honestly, we just knew that it was a great mitochondrial enhancer, that it had been around,

and the safety profile is quite good with it. But it's been really great to get all these reports. In my company, we work with a lot of practitioners; I'm a practitioner myself, obviously. And so we work with a lot of practitioners all over the US, all over the world that are using it in these chronic complex medical illness patients that have a really hard time with some of these symptoms that we've described, whether it be fatigue or chronic concentration issues, or they have exercise intolerance, they have heat intolerance, they have chemical sensitivities. You know all this stuff as well; I can go on and on.

But using this as a support, as another tool in the toolbox can be transformative. And I have countless stories of headaches going away for the first time in years, the ability to exercise for the first time in years, blood pressure that was always out of control getting better, and with just a couple days of methylene blue treatment, which is usually something that would take a longer time to see any major effects with almost anything else. Yeah, as that report a couple days ago of somebody that had severe joint pain, he had joint pain, he tried everything and anti-inflammatories he couldn't take because of ulcers. And he was taking methylene blue, and then after two days, his joint pain was gone, and it didn't come back after he just continued to take a low dose of methylene blue every day. And I think that's the key, too, Wendy, is that the dosing is really important for methylene blue because you have low dosing, you have medium dosing, and you have high dosing. Low dosing is less than one milligram per kilogram, medium dosing is around one milligram per kilogram, and then high dosing is higher than that.

The problem with higher dose methylene blue is that it can be really good. On a moderate to large scale, dosing can be really good for things like infection. It can be really good for people that have Lyme and Bartonella and some other even viral infections, acute viral infections, it can be really quite good. But at those higher doses, it's also something that could be a little bit dangerous because methylene blue, it can build up in the system, and instead of improving energy and resilience, it actually can do the opposite because it has what's called a hormetic dose-response curve, where it works at one level really well but if you put too high, it's going to cause issues with the system. You don't want to keep it high for too long. It also can affect the gut microbiota as well; it affects gut biofilms at high doses. You want to be aware of not taking doses that are high for long periods of time because of that, for example. You don't want to affect the gut biofilms unless that's what you're trying to do because you have an infection, for example.

The lower doses are what we have in my company. We use 16 milligrams, so it's a pretty low dose, but it's a dose that was developed specifically for mitochondrial optimization and nootropic function. And so that's why we really went with that dosing. And the dosing there is very, very safe. It can be used on a regular basis, and you don't have any issues with gut microbiota, don't have any issues with toxicity. I've been using it in my clinic for chronic urinary tract infections with some success at this very low dose. But if there's an acute issue,

then you may want to go into higher doses for the antiviral, antifungal, and antibacterial piece of this to be more profound. And so the nice thing about the low dose is that it's a mitochondrial optimizer. Everything that we talked about here it's very safe, and it can be combined with other treatments as well.

The one that's been looked at the most has been red light therapy or near-infrared light because what red light therapy does is it donates photons. Photons are little pieces of light basically that optimize mitochondrial function, and they actually optimize the same complex on your mitochondria that the methylene blue does. In combination, you have the methylene blue and the red light therapy synergizing together to help you make energy more effective. And so what we have people do is take your methylene blue; if you let it dissolve in your mouth, you can go outside in the sunlight or go in front of your red light panels in about 15 to 30 minutes to activate it. Or if you're ingesting it, if you're swallowing it, then you want to wait about 30 minutes to an hour, if it's on an empty stomach at least, before you go outside because that's going to help. I've been working on this with athletes for example, and their endurance goes up if you do this because the methylene blue is revving up the mitochondrial function and then the sunlight. When you're outside running or doing whatever, you're also going to get the ability to have this energy with the red light at the same time. It's pretty cool.

I think the key for people to know is that dosing matters, in the sense that you want to stay low dose most of the time. Our dosing really was created specifically for mitochondrial optimization, health optimization, and regular use. I use it almost every day. If you live in a toxic world, which we all do, if you're on airplanes, if you're not sleeping as well as you'd like to because you have four kids like me, even though my kids aren't that young anymore, they still wake me up, or the toxins in our environment in general, no matter what we do. I think everybody really deserves and needs a little bit more mitochondrial optimization. I think methylene blue can go a long way to really helping people. And then if you have more of an acute issue where you have an acute infection, acute inflammation, acute trauma, that can even be the strokes, the heart attacks, the things that I was describing earlier, then that's when higher doses may be more beneficial. And also, the World Health Organization dosing is typically around one milligram per kilogram for carbon monoxide poisoning, cyanide poisoning, et cetera.

And then the last thing I'll say, because I'm sure you have questions, is that the kind of methylene blue that you take is very important. There's methylene blue that's in the fish tank cleaner. I don't recommend taking methylene blue; that's for fish tank cleaners. Methylene blue is similar, but it's also typically contaminated with heavy metals. You have to find a good clean source of it. What we use at my company is something called USP grade, which is basically as pharmaceutical grade as you can get, but we don't even trust that. Actually, the first eight months before we launched our company in 2019, right before the

pandemic really, it took us about eight months to find a good source of methylene blue because even USP methylene blue can be contaminated.

What we would do is we would get it from the manufacturer, it would be third-party tested already, then we would third-party test it again or fourth-party test or whatever you want to call it at that point. We would make sure it was absolutely a good clean source of it. And what we've noticed is that from a lot of other companies that make methylene blue, then people go to ours, they find it a lot more effective because it's a stronger dose because it's the dosing that we talked about. It's easier to dose because it's in a troche, these small dissolvable lozenges, as opposed to the troppers, really, really hard for people, and that stains everything if you're not careful. I guess the last piece there would just be that quality is really important when you're looking to source it.

Dr. Wendy Myers: Yeah. I've heard you can get it on Amazon, but I just wouldn't trust that at all.

Dr. Scott Sherr: Do you know what I just heard about Amazon? I was just talking to a colleague of mine. I guess a company called Metagenics, which I'm not sure you've heard of, had a bunch of issues with their products a number of years ago, getting a lot of complaints. They bought \$40,000 worth of their own products on Amazon. And they found out it was all counterfeit. It was all counterfeit. Yeah, it was all counterfeit Metagenics. It was all terrible. I highly recommend you do not buy things from Amazon unless you can find good data from the company in other places. You just don't know what you're getting, is what it comes down to. They're too big of a company to be able to do quality control. And there was another study I just saw recently. A supplement quality is a huge deal, and I know you care about this too. Supplement companies do not have any regulations that they have to follow, zero. They're just not allowed to make any claims that they treat or cure any disease. They don't have to have as much of whatever they say that's in there; they don't even have to have those. The labeling is supposed to be right, they have to have the right labeling supposedly, but nobody's checking these things.

Dr. Wendy Myers: Yeah, there isn't anybody checking anything.

Dr. Scott Sherr: Yeah. There are four docs on my team, including me, at troscriptions, and we made the products so that we can use them in clinical practice. And that's why the company was developed. We wanted to make sure that we had things that we would feel comfortable giving to our patients in our clinics and my clinic and other clinics, and I would feel comfortable asking other people to try because I thought it might help them and not harm them. It's just amazing that there are really a few regulations that any of these companies need to follow. Just be very well aware that you may not be getting what you think you're getting when you get something from Amazon. I would really look at some of the companies that have a better track record, that are doing their own testing like we are, and that clinicians like me are using the products in clinical practice as well. And I think that's also important because we're the ones that will see when people are

having issues with various types of brands of things as things go, as I've had this experience throughout my time as a clinician.

Dr. Wendy Myers: Yeah, it's scary. Amazon is a wild west. There are definitely lots of products made in China that are on there. There are fakes when it comes to supplements. Be very careful with that. And beauty products too. And they can have a lot of heavy metals in them for sure. And so, who shouldn't take methylene blue? Is there anyone where it's counter-indicated for them?

Dr. Scott Sherr: Yeah. If you are pregnant or breastfeeding, methylene blue is probably not a thing that you should be taking. There's definitely some evidence on the pregnancy side that it's not a good idea. There's less evidence for or against the breastfeeding side, but we don't recommend doing it. The other category of people are people that are taking antidepressants. If you're taking an SSRI or a drug that has serotonin reuptake inhibition, one of the newer antidepressants out there, then hypothetically, there could be an interaction. As we discussed earlier, methylene blue gives you a mood boost by increasing some of those neurotransmitters, including serotonin. As a result of that, there could be an interaction between at least a high-dose methylene blue and SSRI medications. As a company, as the prescriptions company, we don't recommend taking them, but clinicians are using them in combination in some ways, low dose methylene blue and SSRIs. And that can be beneficial, but only done under the supervision of a provider, is what we would say.

Other than that, at higher doses, if you have a genetic disorder, I guess you'd call it, called G6PD deficiency, which is basically something where your red blood cells are at a higher risk of having more of a profound response to oxidative stress, then you may not want to take high dose methylene blue basically, it could potentially cause your red blood cells to start hemolyzing or cracking. But that's not something that we see really in clinical practice. It's very, very rare. Those are the major things I would say. The other thing, just to be aware, of course, is that methylene blue is going to turn blue. It's going to turn your mouth blue; it's going to turn your urine blue. These are benign side effects, but if you have anything in your mouth that is plastic, it's going to die that plastic blue, and it's not going to come back. You're not going to see that return back to what it looked like before.

If you have veneers, for example, you wouldn't want to use methylene blue and have it dissolve in your mouth because those veneers would be ruined, for example. Actually, it was a funny story. I had an interview and did a podcast with a guy that had plastic veneers in, and he was going to get permanent ones that were going to be porcelain, porcelain's fine, but he had to walk around and do podcasts for a week with his blue stained veneers because he forgot that he had the veneers in when he took methylene blue.

Dr. Wendy Myers: You have to be careful.

Dr. Scott Sherr:

Yeah. The great thing about methylene blue, Wendy, I would say, is that almost all of us, I think, can benefit from it if we don't have those contraindications. It is about your dosing and about really what your goals are. But as a supportive, as a health optimizer, especially if you have mitochondrial dysfunction and symptoms. I've just been really impressed with how easy it can be for some people to see a significant difference. Going from brain fog yesterday to no brain fog today is a pretty big deal. And then not being able to have a huge amount of exercise tolerance and then being able to go from two blocks to a mile in a week is pretty impressive. And then having joint pain that you've had for years go away in a couple days, saying all those things, most people have more subtle improvements. It's not today and tomorrow kinds of black and whites; it's more about a foundational approach. And that's what our nonprofit's all about too, which is training doctors and practitioners like myself, and like you, Wendy, and people that are interested to learn how to optimize health, vitamins, minerals, nutrients, gut health, neurotransmitter optimization, hormone optimization, circadian rhythm optimization, environmental exposure, et cetera, et cetera.

Because all those things are important. It's not like if you're already putting a lot of gasoline on a fire and you're just putting some methylene blue to help quell it for a couple minutes, the gut fire's not going to start again. You have to be thinking about what's under the hood and what are you doing? Are you drinking alcohol and having McDonalds once a week because you think that's not as bad as having it five days a week or whatever. I was talking to somebody earlier that told me that he was only drinking ridiculously one day a week instead of five days a week. And I'm like, "Well, that's a good start."

And he's only taking cocaine once a month instead of twice a week, "That's great."

I think these are all good things. Those are good steps, but cocaine is probably not such a good idea. Alcohol, we probably know now, is probably not going to help your brain very much, especially if you're already having symptoms that are having you come to see me in the first place. But everybody has their own path, and I get that. But looking at optimizing health and that foundation level is extremely important while you're using something like methylene blue or some of our products as well, that might help with focus and concentration. The other one that I mentioned earlier it's called Blue Cannatine. This is the one that has nicotine, caffeine, and CBD, along with methylene blue. Nicotine can be shocking for people, but nicotine's a fantastic nootropic. You know this, I'm sure, Wendy, most people get scared when they hear about nicotine, but if you don't vape it, you don't smoke it, you don't have it with the other additives that would be another kind of tobacco-containing products, very low dose nicotine. We're talking one milligram here in one of our full troches compared to a cigarette or ... A cigarette's 6 to 26 milligrams of nicotine per cigarette, and vaping products have at least 25 milligrams per puff, I think; it's some ridiculous amount in vaping products.

We're talking about much lower dose, non-tobacco derived, and there are great studies on mild cognitive impairment in Alzheimer's patients as well. Just turning on the brain with increased cognition, memory-focused verbal fluidity, and recall, they all go up using nicotine. It's a great nootropic, and it's a great replacement for some of those other things out there that people are using that unfortunately have lots of crashes, lots of come down, and lots of terriblenesses, like the Adderalls of the world. Not to say that some people don't need those drugs, but I think there is a significant proportion of people that could likely wean themselves off when they optimize their diet and use something like this instead of using something like Adderall. Of course, if you're going to stop any of your meds, do this with your healthcare practitioners, and don't do it on your own; that's not a good idea. But in general, I think there are alternatives for a lot of these people that are stuck on these drugs that don't feel like there's a way out. And I think this is one of them. And those drugs are scarce now too; they're hard to find, getting Adderall. There's a shortage because of all these online companies that are giving out pill mills with it and things like that.

Dr. Wendy Myers: Yeah. Yeah, I know. I actually have a friend who's addicted to Adderall, and she can't find it right now. It's hard for her to get a prescription for it, and she actually needs it; she has been taking it for 14 years. It's difficult to wean herself off of that.

Dr. Scott Sherr: Yeah. We've got a couple guys on my team that were on ADHD drugs for almost a decade and were able to wean themselves off using our blue Cannatine. And the nice thing about the Blue Cannatine for people that do not have ADHD is something you can take periodically just when you really need to get stuff done, you need to focus, you need to concentrate, you need to be productive, you can do it three to five hours, you're going to feel great, three to five times a week maybe at most. But if you have ADHD, then you can even take it more regularly than that, take it on a daily basis. And you can even titrate it. The nice thing about the atrophies is that they're titratable; they come in these little squares. I don't have one on my desk, but they're squares that they're scored on, so you can actually take a quarter of it, a half, or a full. And the average dose for most people, even with the Just Blue, which is the pure methylene blue atrophy that we've been talking about already before this one, is half of a troche at a time.

The Blue Cannatine, half a troche up here, dissolved between your upper cheek and gum. That's the best place to do it because that's where you're going to get the brain hit because the circulation of the mucosa in your cheek goes to your brain and everything. And so that's why you're going to start feeling the effects pretty quickly, within about 15 minutes or so, 15 to 30 minutes, especially usually within that time frame. And so that's why it really needs to be buccally absorbed to really get that effect. But that's what people that have ADHD want, and that's what all of us want, really, is we want that instant hit of focus and concentration. You're like, "Whoa. Okay, this is what it means to really want to get stuff done now. I really want to focus."

But you don't get the tunnel vision and the jitters that you would get from some of these other drugs because it's got the CBD and the methylene blue in there. CBD helps round it out. Some people that use nicotine or even caffeine get jittery and hyper, but CBD really helps it round itself out. And methylene blue is really great support, as we've talked about, for your mitochondrial optimization. You have those benefits as well. Yeah.

Dr. Wendy Myers: Scott, you need to hook me up with some methylene blue.

Dr. Scott Sherr: Yeah, definitely. We'll send you someone to Mexico, man, no problem. Happy too.

Dr. Wendy Myers: Yeah. Well, mainly I want it because my boyfriend and I are planning a trip to Japan, and so I want to get some to give him some, tell him it's going to cure jet lag and watch with just pure joy when he comes out of the bathroom and he has blue pee.

Dr. Scott Sherr: One thing I didn't mention about the blue pee, this will be interesting to you, maybe not to your audience, but I think for you. You can actually titrate your dose to blue pee, and the reason for that is this. Once methylene blue comes into the body and it does its work, it donates electrons, as we talked about, and then it also picks them back up, it picks up electrons because it's an antioxidant. That's what antioxidants do, it picks up free radical electrons. When it does that, it turns from blue to colorless. If you have a lot of oxidative stress in your system, you will not pee out blue; you will actually pee out colorless it won't be blue. But if you're actually peeing out blue, that's a good sign that you've given your body enough methylene blue to neutralize the oxidative stress that's going on in your body. It's a little bit for people. This is just pure anecdotal, so I can't say if there are any studies on this yet.

Personally, but also with a lot of the people that we've been using the products with, early adopters in our products, they'll tell us that if they're at HOME taking one particular dose, their urine will turn blue. But if they're traveling and they're not sleeping as well, and then they're not eating as well, it'll be a higher dose that's required for their urine to turn blue. What I often do with my patients is we'll titrate when their urine is blue, basically. If their urine is blue, that means that they've got enough antioxidant capacity that we've been able to neutralize some of that oxidative stress. With your boyfriend, you have to just make sure that he takes a big enough dose to know that it's blue. But when you're traveling, typically, you do need more because of the stress of traveling. And as I mentioned, we'll be publishing an article on our website pretty soon for a jet lag protocol. That should be up by the time this goes out. And if you go to our website, troscritptions.com, we have a bunch of blogs on our ingredients and on lots of different things, including we have a good article on methylene blue and red light therapy that we were talking about before. And we have another one on dosing. And we'll have this one on jet lag that'll be coming out pretty soon too.

- Dr. Wendy Myers:** Okay, great. Would it work for hangovers too?
- Dr. Scott Sherr:** Good question. I have had a couple reports of people using it in that capacity, along with a lot of hydration as well. The answer is, I don't know. When it comes to why people get hangovers, we know that one of the major reasons is dehydration. I think that's the primary for people. And the other aspect is potential liver stress and some inflammation. I think it might be helpful. I haven't gotten a lot of reports about people using methylene blue specifically for that, so I'm not sure exactly.
- Dr. Wendy Myers:** I was just curious. Yeah. And so, where can we find the methylene blue on your website?
- Dr. Scott Sherr:** If you go to trocriptions.com, that's the name of my company; it's the word tro and the word prescription mashed together, so trocriptions, trocriptions.com. You can also find us on Instagram, of course, [@trocription](https://www.instagram.com/trocription). And you'll find a lot of information there as well as on the website. We also have our own podcast, we have a podcast called the Smarter Not Harder [podcast](#). We do interviews, and we have lots of guests on various topics, including the things that are in the products and the ingredients that are in our products, of course. Oh, one thing about jet lag, which I forgot to say. Sorry, not jet lag, on hangovers, Blue Cannatine's a great hangover remedy because it's got some nicotine and caffeine in there, plus the methylene blue and CBD. Yes, we've got a lot of great reports. For the jet lag piece of the mental fogginess when you get off a plane, Blue Cannatine's great for that, actually. That's actually the reason why we first developed it, is to help people that are sleep deprived after getting on an airplane. It's been a great remedy for me and for my colleagues as well.
- Dr. Wendy Myers:** Yeah, I'm definitely interested because I'm going to be traveling all summer. Yeah, I'm going to be doing a digital nomad thing this summer, so I'm going to need some Scott, got to help me out here.
- Dr. Scott Sherr:** We got you. Yeah, we'll take care of you, Wendy. No problem. Yes, you have the methylene blue; Just Blue is the name of our product that has pure methylene blue, 16 milligrams of methylene blue, as we've been describing. That's your daily health optimizer, that's your mainstay for jet lag, that's your mainstay for mitochondrial optimization, for brain fog, for fatigue, et cetera, and some of the chronic conditions that are associated with those symptoms. And then you have your Blue Cannatine, which is your focus, productivity, your sleep deprivation, actually really great for women that are going through menopause as well, perimenopausal that are having a lot of brain fog and fatigue when that's happening. Blue Cannatine's been a savior for many of these women, and I get reports of this all the time, which is pretty cool. And so that one you can find on our website too. That's also just the same way if they're a quarter, half, or full. I'm a quarter guy because I'm pretty sensitive to caffeine. But if you're not all that sensitive to caffeine, we have people who usually start with half of a troche there.

Yeah. And then we also have one other product on the website, it's called Tro Calm. This one does not have methylene blue in it. It's a combination of CBD and CBG. CBG is another non-psychoactive cannabinoid, great for pain, great for temperature regulation, great for anxiety. And then we have Kava, and we have something called Nicotinoyl GABA or B3 GABA. And Kava is something that most people know about these days, but it increases GABA production in the brain. GABA is your most important neurotransmitter to help calm down brain firing. And GABA is probably the most important neurotransmitter that you are not supplementing right now that most people need, is what it comes down to. But the problem is that GABA supplements do not cross the blood-brain barrier very easily. And as a result of that, whatever you're taking orally, we talked about bioavailability earlier; it's zero for the brain. The GABA you're taking is very poorly bioavailable. We have Kava, which does get across and does increase GABA indirectly by stimulating GABA production, or GABA release, actually. And then you have Nicotinoyl GABA, which is a vitamin B3 attached to GABA. And having a B3 attached to the GABA allows it to get through the blood-brain barrier. You're going to feel the edge taken off very quickly, the stress, anxiety relief.

And it's really great for people. And I fall into this category sometimes, where you have a hard time falling asleep because your mind is racing. Dr. Ted, who started the company, he likes to call it, similar to constipation, thoughtstipation, the idea that your thoughts just stop, they just won't. Your brain is not going to be circling and circling those things about the five things you forgot to do today or the 10 things you have to do tomorrow or the 18 things you have on your wishlist of nomadic places you want to live this summer or whatever. It'll help you calm down. And it's great during the day at lower doses, a quarter atrophy if you're super stressed or if you have a podcast that you're stressed for. I wasn't terribly stressed today, Wendy, so I didn't take one. But sometimes, if you're stressed about a podcast or a meeting, a presentation, taking just a quarter of one can be really great to just take the edge off a little bit.

This one was developed for people that need something as an alternative for some of those other prescribed drugs out there, or these over-the-counter drugs like alcohol, for example, to help wind down, which is obviously going to wreck your sleep, and the prescribed drugs like the benzodiazepine class that are quite addictive. I've been able to wean patients off of these drugs using this particular product. And, of course, if you're going to do that, you want to do that definitely with practitioner support because coming off the benzos can kill you if you don't do it in a very prescribed way. Just be aware of that, anybody that's listening.

Dr. Wendy Myers:

Yeah. I actually used to take Xanax, which is a benzodiazepine, and a doctor gave it to me because I was having trouble sleeping. And it was just nothing. And it was unbelievable; it was the worst thing I've ever experienced in my life as far as how I was feeling. And yeah, those are extremely difficult to come off of. And it just makes so much more sense for anyone who's on any of these drugs. They just flood your synapse with GABA, and so it ends up depleting it over time. And

it's habit forming. It makes so much more sense to supplement with GABA and give your body GABA rather than depleting it, which is what these drugs do.

Dr. Scott Sherr:

Yeah, hundred percent. And really important to be aware that they also create tolerance and they create a withdrawal. And these can be dependable, and they can be really nasty to get off of. I've had people that have been on these things for a long time, we know that they basically give you a risk, it's called increasing your all-cause mortality, which means that you have a risk of dying from anything more commonly if you're taking those drugs than opposed to if you're not, even a bicycle accident. It doesn't matter what it is. If you have those drugs and you've been taking those drugs, you have a high risk of dying if you're taking Benzo or you're taking one of these sleep medications as well. And so the nice thing about Tro Calm is that it can help you fall asleep.

We have a couple new products that'll be coming out, one for sleep specifically, that'll be great for helping people not only fall asleep but maintain sleep as well. But for right now, we have Just Blue, which is our pure methylene blue atrophy. This is one that we've been talking about mostly. This is our mitochondrial optimizer, giving your mitochondria some love, as we say. And then we have Blue Cannatine, which is our focus, getting things done, productivity, your ADHD feeling without the comedown, the crash, the withdrawal, the anorexia, those kinds of things. Anorexia just means you don't want to eat. And then sometimes that's why people take these drugs. But in general, that's not a good thing. And then our Tro Calm, which is our relaxation, stress reduction, taking the edge off and quieting the mind, as we say from the boardroom to the bedroom, even performance anxiety in the bedroom, along with sleep can be. There could be benefits of taking Tro Calm in both capacities.

Dr. Wendy Myers:

Well, that's a great benefit too.

Dr. Scott Sherr:

Yeah, of course. Performing. Yeah, yeah. Come on, guys, we don't want to have performance anxiety and stuff. And so yeah, there you go. Again, all this, Wendy, comes down to the big picture, the 30,000-foot view for me always is, as a clinician, how can I help my patients right now, knowing that what we really need to do is not only do that but we need to address these bottlenecks now but at the same time looking to optimize health over the long term for people, give them the tools. These compounds, these atrophies may not be needed across the long term. And that's okay with me. I'd rather people say, "Look, I can get to sleep with no problem at night because I have a great sleep hygiene routine. I have my tea, and then I have a great conversation with my wife, and we talk about how much we love each other, then we go to bed."

I'm like, "Well, that's perfect. Don't take Tro Calm if you don't need it."

The idea really is to create a lifestyle, habits, diet, and supplementation that works for you and try to keep things down on the supplementation side as much

as you don't need them. But if you do need them, then have options. And that's really what we were trying to develop with the troscriptions company.

Dr. Wendy Myers: Okay, fantastic. Well, Scott, thanks so much for coming on the podcast. That was really, really good. I can't wait to try your product. Your website is troprescriptions.com.

Dr. Scott Sherr: Troscriptions. Yeah, the word troche and prescriptions mashed together into troprescriptions.com. And you can find us on Instagram as well, and you can find me on Instagram if you want. I'm @[Dr.ScottSherr](https://www.instagram.com/Dr.ScottSherr), Dr. S-U-T-T-S-H-E-R-R. And yeah, we have a lot of information on our website, on our blog, and on our podcast. You can ask us questions on our Instagram page. We're as responsive as we can. Most of us, the clinicians, are all involved, and we really do try to help and really try to give as much information as we can.

Dr. Wendy Myers: Yeah. And check out your podcast, Smarter Not Harder. I love that name; that's awesome. Yeah. Well, Scott, always a pleasure talking to you. And if you guys are interested, I did a podcast a few years ago with Scott as well.

Dr. Scott Sherr: Oh, I'm embarrassed. We should do another one, that's a long time ago.

Dr. Wendy Myers: Well no, it was really good. It was on HBOT, on Hyperbaric Oxygen Therapy. It was a great podcast.

Dr. Scott Sherr: It was 2016, so many years ago.

Dr. Wendy Myers: Yeah, it was really, really good.

Dr. Scott Sherr: Yeah. Thank you, thank you. Yeah, I had a lot of fun. Yeah. Thank you for your time, Wendy. This has been fun.

Dr. Wendy Myers: Yes, yes. Everyone, go check that out and go check out your podcast. And everyone, thanks so much for tuning in to the Meyer She Talks podcast. I'm Dr. Wendy Meyers, and I love bringing experts from around the world to help give you those little nuggets and those little pieces of the puzzle to help upgrade your health and live the life that you deserve. Talk to you soon.