Introduction and Dr. Beth's Lyme Journey

Hi, and welcome to another episode of the healing Lyme's summit. I'm your host, Dr. Myriah Hinchey, and today we are going to be speaking with Dr. Beth McDougall, who is an integrative medical doctor.

And she is one of the founders of Jyzen Center, which is a multidisciplinary treatment center for Lyme disease. Welcome, Dr. Beth. Tell our listeners a little bit more about yourself and how you came to specialize in treating Lyme disease.

Thank you. Yeah, well, I've been practicing since 1998 and, came right out of the gate of internal medicine residency knowing I was going to do an integrative practice.

And so came right into an integrative medical practice in the Bay area. And, I, I was very holistic in my thinking. And, you know, I was very interested in bioidentical hormone balancing, natural neurotransmitter balancing, working with the gut, working it very functionally.

I was in that first crop of doctors that went through functional medicine training in 1999, and very early in the practice, I began seeing infectious diseases that looked like Lyme disease, seemed like Lyme disease in the early days of IGeneX lab, I started diagnosing Lyme disease, and the way I handled it in the beginning was more.

There were some really well, schooled like professionals in the Bay area that were treating Lyme disease almost exclusively. So then I was referring to them and co-managing people in the beginning.

And so I diagnosed a lot of Lyme disease. I co-managed a lot of Lyme disease. I didn't treat it myself. I was never a huge fan of antibiotic treatment for Lyme disease.

And so I would let others do that. And then in 2004, I developed Lyme disease myself. I was camping, and while camping pulled a little tiny tick off the back of my daughter's ear.

So I knew it was in tick country and I was in aware of being did bit by a tick and all. But then two weeks later I was home and, was seeing the patient and all of a sudden, in my appointment with the patient, I couldn't move my hand.

And then I stood up and couldn't move my foot properly. I started not being able to move my tongue properly, and I, I knew I needed to go to the hospital, that I was having a stroke.

But I drew my blood and before I left to go to the hospital and sent it to IGeneX because I was, I, you know, I'd taken a tick off my daughter. And sure enough, even after a multi thousand dollar workup, including, you know, CAT scan, trans esophagus, echo and, and all sorts of things, left the hospital with no answers.

And then two weeks later, my Lyme disease test came back positive. So western blot. So I began a journey in 2004. Ended up with terrible response to antibiotics.

like bad like I was throwing micro clots and they were, you know, seeing it in my fingernails and, you know, just it was not a course of therapy that was working for me.

And so then I had to forge my own path against the recommendation of a lot of my colleagues who were like, you need to be on the antibiotics for this many weeks.

And I ended up doing a lot of oxidative treatments, a lot of homeopathy, a lot of nutrient therapy. Was it before buying rights, where out before Susan became Ashes Formulas.

But I was finding my own herbal treatments, and then I realized that I a lot of other things needed to be brought to bear to the situation. In order to fully heal, I needed to do a lot of energy work, deep meditation.

I changed my diet, and I gradually kind of walked out of this like, pretty scary situation. But it took me eight years to fully recover and thankfully I've learned a ton along the way that has allowed me to help people in a much shorter period of time.

I don't expect anyone to have to go through that long journey that I think I needed to go through in order to learn what I learned along the way. And, so yeah, I have now been approaching Lyme disease in a very comprehensive, holistic manner because that is what it takes.

I fight to unwind the chronic Lyme disease cases. They're complex, and it really takes the absolute best of integrative medicine, bringing everything that we know to bear on the situation in order to fully unwind it.

Yeah, I totally agree. Thank you so much for sharing your story. It's, it's pretty amazing. I have a similar story and I always say, like, I went through what I went through to be able to learn what I learned, to be able to treat my patients the way that I'm able to treat them now.

And, you know, had I not been through it firsthand, I wouldn't be able to identify with so much of what they identify with, from these infections. Absolutely.

Yeah. That is that is the course of the of the healer. Yeah. Yeah. So you have a pretty amazing center there, I hear. Tell us more about it. Tell us about the different modalities that you have brought in under one roof.

Yeah. So, I moved my clinic of over 20 years into this larger center that I helped create with a couple other co-founders and it is it's got integrative medicine, intravenous medicine, full laboratory, the largest suite of energetic biohacking technologies for health under one roof in unit in the world.

we've been told by so many people, and it has a full integrative medical, like an, like, integrative bodywork department with an all star cast down there, including physical therapists, deep tissue therapists.

Building a Multidisciplinary Lyme Treatment Center

We use to utilize a lot of technology down there, like shock wave and wind back in a variety of things to kind of break up facial adhesions. We do a lot of, analysis of gait and posture and ability to do functional movements and see we diagnose body asymmetry.

We have a full neuroscience wing where we have an incredible neuroscientist named Cindy Reynolds, who does 19 channel EEG brain mapping and neural modulation and neurofeedback.

And it really takes all of the things that we have here to bring to bear on on the situation with people, to unwind it fully. so, for example, like, you know, it's a little different if you just get bit by a tick and you have an acute infection, you can often treat that quickly.

And that's simple. But what I tend to see are people that have been sick for a really long time. You know, maybe they were sick kicking around the medical establishment for a while before they were finally diagnosed with Lyme.

or maybe they were treated and someone didn't pay attention to coinfections or didn't pay attention to the potential of, you know, that they had been exposed to mold or something like that.

And so they were only partially treated and didn't really get better from that were, you know, maybe someone has even been through like enormous antibiotic courses and still they're not quite feeling right.

And so I created this center not just to treat Lyme disease, but, you know, chronic disease, a variety of variety know a variety. But but what I find is that oftentimes a Lyme patient could be kind of broken into some categories.

You have those individuals that are slow detoxify, and they have trouble when you start treating their pathogens because it generates a lot of toxins and they have a hard time getting them out.

so we have strategies for that. We have those individuals where their symptom presentation is largely neurological. You know, they have mood changes, brain fog, you know, headaches or even peripheral neurological issues like muscle fasciculations, neuropathy, etc..

And then we have those that have more of a body focus where they have joint pain, muscle pain, you know, or, those that have more of a fatigue type presentation.

And sometimes people have a little of all of it. And so that's why we needed to, to kind of create this enormous ecosystem here is to kind of provide the resources to address all of the issues, because what I find is that so, for example, let's just break it down, starting off with the poor detoxifiers sometimes people we really need to like before we treat anything, we need to focus on opening up the pathways of elimination.

So we do that in various ways. You know, we do it with some some kind of we got work liver flushes. We do a lot of drainage remedies, oral drainage remedies, a lot of intravenous drainage remedies.

We have a kit here which is an infrared ozone sauna. So we might like spend the first couple of weeks we may spend in really severe cases the first month really just opening up those pathways of elimination so that they when we do turn our attention to treating pathogens, people can get that stuff out of the body without it making them feel worse.

And then if someone has, a lot of body issues, it's really important to address that, because I find that that pathogens like to hide in areas of stagnation in the body.

So a lot of times, you know, people have pulled themselves in particular ways. You know, they have kind of incorporated their biography, kind of encoded it in their biology, and it affects the way that they hold themselves.

And they may have, let's say, kind of a head forward posture or their shoulders might be elevated or, or maybe they had an injury at a young age and it kind of like tweaked their pelvis or something.

And they have these structural asymmetries. Well, that's going to lead to some facial adhesions, and that's going to be the type of area where pathogens are going to like to hide and proliferate.

And it's really hard for the immune system to get in there. And even your therapeutics to flow in there to treat what's there. So what we find is that simultaneous with the treatment, we need to be helping people to to become aware of kind of how they're holding themselves and their their structural asymmetries and working in various ways to kind of realign, you know, with myofascial work, shockwave, which is focused ultrasound to break up facial adhesion and, do you like functional exercises to try to, to kind of like rebalance the posture?

We find that very helpful. And then if someone has really a strong neurological focus, we can do 19 channel EEG brain mapping. And this has been an incredibly valuable tool because we find that sometimes people have traumatic birth, sometimes they have emotionally traumatic childhoods.

And a lot of times that will lead to the limbic system in the brain being stuck on. So they it's like firing 24 over seven. And then that can that can result in the autonomic nervous system being stuck in a fight or flight state, which impairs your immune response.

And it makes it much harder to to get rid of infections. So so we have a lot of techniques here for calming the limbic system down, for balancing the autonomic nervous system.

And then of course, if there is a history of head trauma, we can spot that on a neat EEG and then work on healing the, the, the areas of brain injury.

And doing that simultaneous with treating infections really allows us to get those pathogens out of the nervous system. Yeah, I think it's so important to do a holistic approach where you're, where you're simultaneously treating all of it so that the patient can heal.

do you have like a specific way that you would rotate patients through or specific protocols that you develop for patients? Yeah. And everyone's unique and I'm sure you practice that way as well.

There's no like specific protocol that's a one size fits all. It's very individualized. But we can kind of start with a skeletal backbone of you know definitely be thinking of these things in people that are presenting in this way.

but yes, we design protocols to kind of like work throughout the ecosystem. And so everyone needs some degree of opening up pathways of elimination. Then then we turn our attention to treating infection.

And I love oxidative treatments. So we do a lot of episode two here. just, just autohemotherapy with ozone and light wavelengths. we do a lot of, of other types of, of kind of intravenous therapies for treating infectious disease.

And then meanwhile we're, we're sending them to the Hockett so they can do they can they can detoxify that way. And we're sometimes pairing the IVs with the drainage remedy IVs.

And then and then depending on their focus. And we'll be working on brain training, brain neuromodulation, neurofeedback or a lot of body work, or both, depending.

And and then at a certain point, you need to begin doing therapies geared toward up regulating mitochondria and cellular health. So that is a huge focus here.

I do red light near infrared light band therapy, intermittent hypoxic training, exercise with oxygen therapy, hyperbaric. We do all of these things to help to boost mitochondrial function, stimulate my autophagy, which is where the body will kind of edit and repair and eliminate damaged mitochondria and birth new, more pristine mitochondria.

We do a lot of, intravenous NAD to try to upregulate mitochondrial function that way, as well as oral supplements and in an area we didn't really speak about yet.

that I think is is foundational to people getting better is to do some work kind of excavating and helping people become aware of and then releasing where they had stored trauma in their system.

And sometimes we see it encoded in them in the nervous system, but other times it's just it's stuck in the energetic anatomy of the body. And it becomes an impediment to fully resolving healing, you know, fully healing. So, we do resonance biofeedback therapy here and deep energy work with people that are interested in pursuing that, because I think that that that deep level is foundational.

Yeah, I agree. So what would you give as advice to, a potential patient who's listening?

Personalized Protocols for Detox, Infection, and Nervous System Support

What would what would be your top three pieces of advice that you would give a patient when it comes to seeking treatment? Well, be wary of people that think this is they can approach it fully on a physical level.

You know, one pathogen here's a here's a here's a treatment for that pathogen. That's all you need. And then of course, and I'm sure other people on your, you know, this summit have talked about this be wary of thinking it's it's one thing, you know, because oftentimes it's not just Borrelia, it's borrelia and co-infections.

You know, it's Bartonella. It's would be easier. It's for kids. Yeah. Maybe mycoplasma, maybe chlamydia. Maybe maybe the stress of having those infections has led to some viral reactive ation.

You know, maybe there's been some lifetime exposure to mold. And now you have micro toxins in the system. You know, someone definitely needs to be paying attention to the diet and that making sure that you're eating the foods that are right for you and the hormone balance.

And so all of these things need to be addressed. And so be wary of of practitioners that think it's just like one bug, one treatment. That's all you need.

Yeah. Anything else? Yeah. I think also it's important to do some deep introspection and and work on an energetic level. I think that, meditating and developing a practice where you can sink in and really get to know what you are holding in your system is going to go a long way toward eliminating that the the pathogens and coming to a state of of great vitality.

The other thing that I think is important is, is being mindful while you're going through the process. I know it was so important for me because you're emotional vibration plays a big role.

And when I had neurological symptoms, they were kind of scary. And so if I allowed myself to kind of get really fearful about my future. So if I started Future Rising and kind of stayed out of the present moment, I would see my symptoms kind of spiral out of control.

And then if I could become aware that that I was really out of the present moment, fearful about the future, and just could kind of bring myself back to the present, the moment I could call on those symptoms down.

So we're really powerful. Our minds are incredibly powerful, and we need our minds to be on the team, so to speak. You know, we need to all we need to be helping ourselves out by by staying present.

Yeah. I think one of the common themes from this summit that most of the guest experts have really, brought up in reinforced is that, you know, if you don't think you're going to get better, you're probably not going to get better.

You know? So having hope and trusting that you will get better, you know, and almost like having that as your mantra. You know, I always tell my patients like, you don't have to don't lie to yourself.

Don't say you're healed. Like obviously your body doesn't know that's true. But you know, if you say like, you know, I'm healing. I'm getting better and better every day, you know what I mean?

It goes a long way. And that positive outlook, you know, and gratitude for even the smallest little steps, right, that you're making, as improvements go a long way to stop you from going down that that spiral.

I could not agree more. And it's so important and and I, I, I remember in the early days, one of the most impactful things that I had was this energy healer that I worked with that was holding this vision up for me of of being entirely well, she almost like, refused to see me as not entirely well.

And it was a little frustrating at first. I was like, so not feeling well, but then I was able to kind of begin holding that for myself. And then resonating with that.

And then and then I realized that I was able to kind of dual track it, where there was a part of me that was always focused on me as a thriving well person, and then going through the steps of treating what I had and so it was like, you can do that.

You can kind of kind of acknowledge what's going on in your body and take the steps to improve it whilst holding this vision of yourself as well. And I think that's that's really required for recovering from anything, whether it's cancer or, you know, a neuro disease or Lyme doesn't matter.

Yeah, I think also, Well, obviously being sick for a long period of time, like having a chronic illness is going to, you know, impact your, your mindset and your outlook in your in your vision in a, in a certain negative way.

but also like dealing with the fact that there are certain centers in our brains when we have this stuff that actually are inflamed and almost on fire, right, that are bringing out various, neuropsychiatric symptoms, that it's just it's a huge double whammy.

And so I think for a lot of Lyme patients, having that positive mindset and going through all of this is, is hard because you have the physiological impacts, but then you also have like the emotional impacts.

But working with a good therapist or healer, energetic healer, whatever they may be, to to help you get there just is, is so impactful and it really impacts your immune system in a positive way.

And, you know, your ability to actually heal. I completely agree. Yeah, yeah. And you bring up such a good point about how inflammation in the nervous system affects our immune and outlook.

And I also find it affects our ability to sleep. Right. I mean, I see that all the time. And and so one of the things that I find indispensable in being able to help someone is this is working with the neuroscientist here, because I can do a 19 channel EEG on somebody and right away tell if their brain is inflamed, you know, if it's on fire, if it's or if there's like kind of like dormant like areas that are have low voltage and are under function under firing.

So it's, it's like this beautiful window in to what's going on. And then of course I would be handling things differently if the brain is inflamed. So it's it is it is interesting because we do when the brain is inflamed, you know, we do need to be kind of working on, you know, quenching free radicals, working with any inflammatory type, therapies, pulling toxins out of the brain and, you know, and then treating infections in a way that is something they can tolerate.

Yeah. So you bring up such an important point with sleep, right? And the immune system's ability to function properly and repair the body and all of that.

You know, when you have a chronic illness. What, what are some of your favorite? I don't want to say remedies, but what are some of your favorite approaches to a patient who isn't able to sleep due to an infection like Lyme, Basia, Bartonella, etc.?

Yeah, yeah. Great question. Well, of course I bring everything integrative medicine has to bear on it. Like, you know, working with supplements such as like magnesium L three and eight and L-Theanine and Gavin and Magnolia Bar.

Again, I find hormone balancing incredibly important because the steroid hormones have any inflammatory properties. And so if you have this, if you're unfortunate enough to have this kind of synergism with perimenopause or, you know, kind of maybe even secondary adrenal fatigue from the stress of all of this and the levels of these steroid hormones are going down, that's going to exacerbate your body's ten, you know, in inflammatory tendency.

So really, I think breaking into the situation by, by like balancing the hormones first off can be incredibly helpful. And then you can be working with supplements on top of that, even things like intravenous glutathione on.

And someone can tolerate that and quench inflammation. And then gentle detox like with with the neuro drainage remedies that can begin to to pull the toxins out of the brain, usually we can begin to get people sleeping.

occasionally we have to work with some pharmaceuticals. And I always thought, I don't love pharmaceuticals, but and I don't love lifetime use of pharmaceuticals for sleep.

But like, if you need to take something in order to sleep, it's better to sleep than not sleep. So I think in the beginning, sometimes that's where it's like judicious use of pharmaceuticals comes in.

Yeah I agree sleep is so important. You really so do you have a favorite modality there in your center that you want to talk about. More like there's so many that I love.

But I would say we have three no more beds. They're the red and near-infrared light beds. It almost looks like a

tanning bed. You get in, you take your clothes off, you get in, and then you close the lid down and it's red in near infrared light wavelengths.

Mindset, Sleep, and Emotional Healing

And those wavelengths of light are are incredibly powerful for up regulating mitochondrial function in a lot of disease processes. And because of infections or toxins, sometimes cytochrome c oxidase, one of the enzymes in the electron transport chain, gets blocked.

And so the energy production goes way down. And the red light and infrared light wavelengths will keep that toxin or that pathogen off of that enzyme, kind of liberating it so that it can begin functioning fully again until it really improves energy production within the cell, which then has so many ramifications.

Because when you have more energy being produced in the cell, it alters the cellular page, it alters the cell membrane potential, which is almost like the little aura around the cell of electrical charge that can improve the health of the cell and make it less vulnerable to invasion with microorganisms. So the red light, near-infrared light wavelengths improve energy production within the cell.

They also have been shown to be anti-inflammatory, immune modulatory, and they release the tissue specific growth factors that are, you know, going to help with the healing in the repair of the of the joints, in the tendons and the ligaments in the brain.

So red light therapy is so helpful and usually recommend someone do it like a couple times a week to three times a week for up to 20 minutes. Yep, I was just going to ask.

Red light therapy's amazing. I was wondering how many times a week you recommend it? And is that something that a patient can find you and come there to do?

Or do they have to do a whole, you know, well-rounded approach? Or if someone just wanted to come and do red light, could they do that? Yes they could. Yeah, they could do that.

Yeah. I mean, there's so many therapies I love here. I, you know, we have exercise with oxygen therapy here, and sometimes it's the first time that a chronically fatigued patient can actually begin exercising, you know?

So I've had people that have like horrible exercise tolerance, tremendous post exertion, fatigue and they can't exercise. But then if you have them exercise while breathing oxygen, they can and they don't have that like that, that lingering fatigue afterwards.

So it's been a way to build up endurance in people that are very, very, deconditioned. And, and then it builds on itself because, you know, that they can begin to build some muscle mass, and your muscle contains a lot of mitochondria, and then the mitochondria generate more energy.

And it just kind of brings up the energetics of the entire body. So I love that. And the exercise that we typically recommend is called Vesper. And Vesper is, used by Olympic athletes.

It's used by professional sports teams. It's where it's kind of like, come in device and you're pushing with your, your arms and your legs while you have compression cuffs on your upper arms and upper thighs that have cold liquid coming in.

So it's a 20 minute workout, but you get the benefits of like a two hour workout because you're getting aerobic and anaerobic benefits because of the compression.

But anyway, so that that with oxygen is a game changer for a lot of people with Lyme. So would you do both of those together. Oh wow. Yeah. Do you need a second.

I can have them edit this out okay. That's good. Yeah. Are you good. I'm good. I think I had a cold two weeks ago of course. It was like finally got sick and I was like just finishing just finishing.

And you know how, like, you breathe the wrong way sometimes when you have a cold and it, like, went down the wrong way? I had to I had to leave, I came back, I like tears running down my face like, this is terrible.

Oh, no man, at least we can edit it. At least they can edit it. Yes. Yeah. And, boy, there's so many other therapies I love here. It's just crazy, you know? You got to come.

Yeah. I would love to come and see the place. So listen, since we're going to have them edit this anyways. So I don't want to, you know, I don't want to keep asking you, like, is there anything else, you know, anything else that you want to talk about.

So is there is there anything that you want me to prompt you to talk about before, before we end the interview, Maybe just some of the other therapies that we do.

Okay. for mitochondrial upregulation, I think that's so critical, but there's so much we could talk about and, like, do you do the IGL test? What's that?

It's a test that we send to Germany to see, like toxins that are like complexed in the cell membranes and in that, membranes. So I'll ask you about up regulating that, like if you have any other specific therapies for up regulating the mitochondria.

And then it's illegal. Okay. Yeah. And PCBs you know. So I'll just mention that at the end. Okay. All right. So we'll jump back in okay. Okay. So tell me what other tests you have there.

to help to up. Sorry. Start over. Okay. So Dr. Beth, tell me what other, modalities you have there to help to up regulate the, mitochondrial function.

Quite a few. Well, one of them that I love is intermittent hypoxic training. So intermittent hypoxic training is where you're breathing oxygen through a mask while you're lying in a in a recliner chair.

And the coach will cycle you from normal levels of oxygen to mild hypoxia and back four times in a session. So it's like being at sea level and then going up to altitude and coming back four times in a 40 minute session and in 2019, three scientists won the Nobel Prize for discovering something called half one alpha.

This procedure releases half one alpha. And what that is, is a master gene regulator that will trigger the transcription of thousands of genes that are involved in how we utilize oxygen.

So it basically enhances the efficiency with which we utilize oxygen and generate energy from oxygen and glucose. And so it it causes you to make more hemoglobin so you have better oxygen carrying capacity.

It causes you to sprout new capillaries so you have better oxygen delivery. It improves the coupling of oxygen in the mitochondria for energy production.

It even activates these things called glucose, which are insulin independent glucose transporters, into the cell. So this therapy is great for metabolic syndrome losing fat mass.

it also triggers something called might haffajee, which is really kind of the holy grail in medicine. What we're trying to do is have the body more efficiently, kind of like edit and repair or even destroy damaged mitochondria and then burst more pristine mitochondria.

And this therapy has been shown to do that. It's got tons of clinical research on, you know, treating various types of conditions, but we find it really helps upregulate mitochondria function.

So we'll do that for nine patients. So so I think I mentioned before a lot of pathogens that have an intracellular stage in their life cycle can go also into the mitochondria and begin to suppress the mitochondrial function.

So this is this is kind of an antidote to that. So if someone was going to do this therapy how many times a week and for how long would they have to do it before you would see like a substantial increase and, highly functioning mitochondria.

Now about 30 treatments. So. And is that within like a certain window of time. Depends. You know, we have people traveling from around the world to come to our center.

And they may come for let's say, you know, four week, six week or even a 90 day period of time.

Mitochondrial Therapies and Detox Strategies

And they're just trying to get those 30 treatments within the time that they're here. You know, some people do it five days a week. Some people do it just like 2 to 3 times a week based on their protocol.

And we will create these stacks. So, you know, sometimes people will be getting an IV in the morning and let's say they come in, they do some brain training and they get an idea.

Then they might go do like a no before bed. Then the intermittent hypoxic training, they might do a cryotherapy treatment later, they might do the exercise with oxygen or on a different day, you know.

So and then they're heading to the integrative bodywork department. They're seeing the physical therapist down there or the deep tissue therapist. Maybe they're doing the shockwave therapy to break up facial adhesions.

So it kind of depends on the individual and what they're presenting with. But we create these protocols for them that involve multiple therapies stacked in a day.

That seems like the smart way to do it. So they're not coming back and forth to the center multiple times a week. Right. So you had mentioned earlier or when we were off the air about PK IVs, is that something that you would work in to these stacked sessions as well?

Absolutely. Often necessary. So PCA is is is a it's a really tried and true protocol I've been using for, I don't know, maybe like almost 20 years and it's, it's intravenous phospholipids followed by gluten thiamin and salinity.

Acid. And then at a certain point we add in some phenol butyrate as well. And what that most of the toxins that we're exposed to in our lifetime are fat soluble.

And so they tend to collect in the fatty compartments of our body. And one of the largest fat reservoirs in the body are collectively all of our cell membranes and even the membranes of our intracellular organelles like mitochondria.

And when you collect toxins in those membranes, it begins to disrupt cellular health and energy production. And so, like if someone's been exposed to mold, mycotoxins are fat soluble, for example, and they're going to collect if someone has had Lyme and co-infections for a long time, even during the treatment of those co-infection, you know, those those infections, you're generating a lot of bio toxins.

And very oftentimes those will go into hiding in the cell membranes. And you at some point need to go and sweep those out. Heavy metals are a fat soluble, petroleum solvents, glyphosate, pesticides, you name it.

So they're most a lot of what we're exposed to is fat soluble. So we do a very sophisticated test called IGL that we send to Germany in in certain cases.

And it measures DNA addicts of toxins and then toxins that are complex in the cell membranes and even in mitochondrial membranes. And it can measure it's a good window into mitochondrial function.

So if we see a very high toxic load in some way, we need to begin to sweep that out. And of course, I've talked in the beginning about opening up pathways of elimination in the infrared ozone sauna and how beneficial those things are, but sometimes you still have to go and kind of sweep it out of the cell membranes and then mop up what gets eliminated.

And so we sweep with the phospholipids and then even left with glutathione and, and fill in a gas acid. Take a break. You need water. that you. I was there I get it.

It never happens. Wow. That is a beautiful crystal. Thank you. Oh my God. Yeah. It's like, out of all the interviews I've done in my life, I've never had a.

It's all right. Okay. Anyway, so you were, I think you coughed when. I mean, I don't know how much you want it edited, and I'm happy to make them send it to you.

You know what I mean? You're okay with a little cough? Yeah. Okay. I just want to make sure some people aren't. Yeah. So I'll just. I'll just pick up and just say so we flush out these toxins with the phospholipids, and then we mop them up with, with glutathione which is a self feeding agent.

And then methylated agents like folic acid and and methyl cobalt in. And that is the best way to then route these toxins out of the body. So are all of these in one I. V.

or you would do them in a sequential order. So the PK protocol is is a series of sequential IVs in all at the same time. So you use one right after the other.

And that's that's the protocol. But they would be containing the glutathione and the folinic acid and in the IV that the phospholipids. And then you hang separately the the butyrate.

Then you hang separately the glutathione and then B vitamins at the end. And then how many of those would you recommend? It just depends on the person.

Like it depends on the high, the top, the levels of the toxins, whether they have had mold exposure. Oftentimes for if you've been exposed to mold, you're going to have a lot of mycotoxin exposure.

you will see, for example, on the 19 channel EEG brain map, low voltage in the brain, because mycotoxins are direct mitochondrial poisons. And when the mitochondria are suppressed, the the energy production goes down.

And we see that as low voltage in the brain. So when we look at a brain map, if we see this kind of blue brain, which is there kind of color coding for low voltage, it's it's amazing.

If we begin detoxing mycotoxins, you will see the voltage of the brain starting to come up. And we of course can do other types of therapies like the Vielight on the brain in specific areas to kind of improve the mitochondria.

So like just how you can get in the NovoTHOR bed which is a red light near-infrared light bed, you can wear special no red lights on the skull that like will penetrate down and activate the mitochondria that way.

So truly at the end of the day, you know, we are doing so many different things to try to upregulate mitochondrial function because that is the foundation.

And it did it. I already said, like your childhood traumas and cleaning, the energetic anatomy is the foundation. But like from a cellular foundation, it's the mitochondrial health that you need to pay attention to.

Right. And it's so important. And like you said, it's so much more than just focusing on killing an organism. You know, even even when we're looking at the opportunistic infections and the co-infections and all of those things, I always say it's like, you know, patients come in and finally they're like, yes, I found the underlying cause of all of my issues.

It's Lyme disease or it's this infection or it's that infection. And I'm kind of like, I take it a step further and I'm like, but actually, now what have those infections done to create other underlying causes in the body?

Right. And it's like, so we have to be a detective and go in and figure out, like all of these other things that have been altered in the body, like the mitochondria.

And it's like we have to simultaneously just fix everything while trying to kill these infections. Absolutely true, absolutely true. And unless you do, you don't get better people have even said, you know, I, I don't think you actually get rid of Lyme disease.

You just put it in a dormant state or it never really goes away or I don't believe that anymore. I think you can really get it out. Yeah, I think it's all about the immune system.

I think if you can recover the immune system and get the immune system to function properly, then it is possible for your immune system to get it out of your body.

it's just hard to tell, you know, in the end. Is it there in remission or is it out of the body? And I don't think anyone really knows the answer to that question.

Yeah, right. So why don't you let our listeners know, where and how they can find you if they'd like to become a patient. They can go online to jyzen.com which is J Y Z E N And they can also find me on social media @bethmcdougallmd Okay. And are you accepting new patients?

I do, I have a long waiting list, but we all practice exactly the same way here. And Dr. Maria Marion, who is incredible, is accepting new patients and we handle things absolutely the same.

Wonderful. Yeah. Any last pieces of advice for our listeners before we sign off? Just that I have hope you can get through this. I have done it for so many people, including myself, and you can bring yourself all the way back to an incredible state of health and vitality, and maybe even healthier than you were before.

All right. Wonderful. Thank you so much again for joining us, Dr. Beth, and thank you all for listening. I'll see you next time for another episode of Healing Lyme.

Take care. Wonderful Myriah Thank you. You're welcome. Bye.