Introduction to the Functional Edge

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I have patients that will write me sort of like books of their history. And you know, a lot of them are pretty perturbed with me that I haven't read it before I've sat down with them.

And to me, you just learn so much in a history. And I want to be able to draw my own conclusions. Welcome to the functional edge. I'm Dr. Julia Ward, and this is where science meets real world strategies for living healthier, sharper, and stronger.

From uncovering hidden environmental toxins to unlocking peak performance and mental clarity, we cover it all. Ready to take control of your health and thrive?

Let's dive in. Hi, and welcome to the Functional Edge podcast. I'm your host, Dr. Julia Ward, medical director and founder of Balance Body Functional Medicine.

Today, we're honored to welcome Dr. Mariah Hensche to our show. In this episode, Dr. Hensche will be sharing insights on Lyme and chronic complex disease.

offering great expert guidance to help you navigate your health journey with the latest advancements in functional medicine. So stay tuned for an engaging conversation that promises to empower and inspire your path to wellness.

Welcome, Dr. Hinchy. Thank you so much. Thanks for having me. It's great to be here with you. Yeah, why don't you just tell us a little bit about yourself and then we'll kind of launch into some questions.

Well, I'm a licensed naturopathic physician in the state of Connecticut as well as New Hampshire. I have been seeing patients for about 20 years. Lucky enough that I have been Lyme literate right from the get-go.

And I would say I have been specializing in treating Lyme for the past 17 years and now solely only accepting patients that have a chronic vector-borne disease or long COVID or a child that has pediatric special needs.

Dr. Hensche's Background and Lyme Focus

And a lot of times there's overlap with the vector borne diseases and COVID and things like that in that population. Great. How did you get into this?

So I got into it, I would say, by force. Never anything that I wanted to specialize in. I actually became a naturopathic doctor because I wanted to practice longevity medicine.

And in school, I had a very young woman who had chronic Lyme and Babesia and had had a pick line and failed IV rosephin for like six months. And so it was on my radar that Lyme and other vector-borne diseases are not what we are taught they are in medical school and that they don't present with a rash and arthritis, you know, if we're talking about Lyme and easily resolve with a short course of antibiotics.

And, you know, I started out practicing in Connecticut. It's where I'm from. And when you're taught, you know, root cause medicine, find the underlying cause, find the root cause, you know, oftentimes with these complex chronic illnesses, there's one of these stealth infections at the heart of it.

So, you know, I'm also one of those people that, like, I can't really deal with only knowing a little bit. So if I'm going

to do it, I'm going to know everything there is to know about it.

And I got involved with the International Lyme and Associated Diseases Society pretty much right out of school and started going to their annual meetings and really learning everything that I can about proper diagnostic criteria.

It is a clinical diagnosis. It doesn't matter really what your test results say. And then we could go down a rabbit hole with testing and how it's not complete and inappropriate with these conventional labs and talk more about the specific specialty lab companies that are out there that do the testing right.

But in the end, it comes down to a clinical diagnosis anyways. So when a patient arrives with years of symptoms and a stack of labs, what's your first organizing framework for that case?

So I'll be honest, I don't look at labs and I don't look at history and I don't look at other doctors' opinions until I have sat down with that patient for a solid 90 minutes and I've heard their history from their mouth.

I have patients that will write me sort of like books of their history. And, you know, a lot of them are pretty perturbed with me that I haven't read it before I've sat down with them.

And to me, you just learn so much in a history. And I want to be able to draw my own conclusions. You know, I don't want to treat like some phantom patient with, you know, with other people's opinions in labs and whatnot.

I want to be able to kind of form my own opinion, and so that's what I do. And then, of course, I'll look at everything that's brought to me after the fact, but I feel like being a good clinician is really being a good detective and sitting down and letting it unravel naturally.

What are the most common pitfalls in diagnosing Lyme and co-infections, and how do you handle discordant test results when the clinical picture is compelling?

So again, it's a clinical diagnosis, but you know, when it comes to the test, like let's say that we're just talking about Lyme disease. So Lyme disease is caused by a bacteria called Borrelia, and the Lyme disease that became sort of like found in 1975 in Lyme, Connecticut, which is where it got its name, that's Borrelia burgdiforae.

And so that's just one species of Lyme. but there are roughly about 18 or 19 different species of Borrelia that can cause Lyme or its cousin, as some people call it, tick-borne relapsing fever.

Clinical Diagnosis and Testing Pitfalls

And so if you go to your doctor and say, you know, I think I have Lyme, I want to be tested for Lyme, and say they use a conventional lab like Quest, they're going to order, typically it's a two-tiered test still, which is flawed in its own way, but basically they're going to look for antibodies to Borrelia burgdorferi.

And when they do that, they're only evaluating that one species. You can now also order the miyamotai species as well, but again, that's looking at two species, not looking at the 18 to 19 species that can cause Lyme.

You know, so we can't say that you don't have Lyme because we looked at only two species. We would have to look at all of the species to be able to tell you you don't have Lyme.

So that's kind of problem number one. Number two is that testing for Lyme doesn't test for Babesia, Bartonella, Ehrlichia, Anaplasma, Rickettsia, right, any of these other bacteria and or parasites that you can get from the bite of an infected tick.

And by the way, Bartonella can be transmitted by other biting flies, lice, mites, things like that. And we also, you know, Bartonella and Lyme can be passed in utero from mother to child.

So there's other vectors, other ways that one can acquire these infections too. you know, which leads to another

diagnostic pitfall, which is not remembering being bit by a tick or not seeing the bite, right?

So we have to keep in mind that all of this doesn't only come from a tick. So then there are people who don't make adequate antibody production too. these infections because these infections actually alter the immune system's ability to see it and fight it correctly.

And in some people, that results in an inability to make antibodies. And most of the tests that we're looking at are antibody tests. So they're called an indirect test, which is evaluating the immune system's response to the infection.

And unfortunately, if you're one of those patients that aren't making antibodies, your tests could come back negative. Then on top of that, if you test too soon, so say you have a new tick bite and you get tested within the first two weeks, your body might not have had the chance to produce the amount of antibodies needed to have that test be positive.

And then you could end up with a negative test right from the get-go because your doctor tested you too early. So there's a lot of pitfalls. when it comes to testing.

And again, that's why if we're relying on a test, saying negative or positive to make this diagnosis, you're going to have a lot of misdiagnosices and, you know, chronic infections resulting.

Right. A lot of complexities. So it's no wonder this diagnosis has been so complex and so misunderstood, I think, in the past. Absolutely. Can you walk us through your tiered treatment model?

Like when do you favor antibiotics versus botanicals, you know, versus a combination or pulse strategies? Sure. So when it comes to a chronic infection, I don't use pharmaceutical antibiotics.

I use herbal antibiotics. And sort of like the crux for me is that I would say, you know that cliche, once you have Lyme, you always have Lyme, like you'll always test positive, it'll always be there.

I think that that's true if the patient hasn't been treated appropriately. And what I mean by that is that healing from Lyme disease and other vector-borne diseases really requires two things.

Number one is getting rid of the infection, obviously. Number two is rebuilding the immune system. And I would argue that number two is actually more important because there's no amount or combination or duration of pharmaceutical antibiotics that takes any infection that our body ever has and brings it from, you know, the trillions of organisms that are causing it down to zero.

So the pharmaceutical antibiotics and herbals as well shrink the load of the infection to basically what the immune system can handle and then the immune system takes over and it finishes getting it out of the body, right?

So you can take antibiotics for the appropriate amount of time in the right combinations and you can shrink that infection down close to nothing. But if you haven't fixed the immune system, there's nothing that stops it from replicating and growing back.

And the way that these organisms hide inside the cells and sometimes in immune cells like macrophages or behind a biofilm, you know, that they use to wall themselves off from the immune system, If we don't get every single last one of them, their nature is just to multiply and grow back.

And as they start to grow back, symptoms will return because they continue breaking down the body again. So we have to fix the immune system in order to get this infection completely into remission or eradicate it from the body.

So when it is chronic and there's already been alterations in the immune system and in the microbiome, and the body has now become hospitable by the immune system and this inflammation altering the terrain of the body, we have to focus on getting the inflammation in check and rebuilding the immune system.

And if we are actively breaking down the microbiome and causing further dysbiosis using long-term pharmaceutical antibiotics, we're not going to be able to rebuild the immune system, right?

So in an acute case, I am all for pharmaceutical antibiotics or antiparasitics layered in with herbs, and we could talk more about that after. But in the chronic setting, I am all about using these studied proven antimicrobials that have been shown as effective as doxy and sephiroxime, you know, in treating these infections while we are dealing with the pro-inflammatory cytokine cascade, the immune imbalance, the gut damage and disruption and kind of helping to rebuild all of that in the body.

So again, in the end, we have rebuilt the terrain and we've actually healed the person, you know, instead of just focusing on killing that organism.

Treatment Philosophy: Herbs, Antibiotics, and Immune Repair

Yeah, that makes much more sense. So biofilms and persisters, which approaches have been most clinically meaningful and how do you track progress beyond symptom diaries?

So I actually don't look at a lot of symptom diaries. What I do is every time the patient comes in, you know, we go over their symptom list that's unique to them.

And we get a severity rating on a scale of 1 to 10 as well as a frequency rating. And then we look at the sheer number of symptoms because if someone is being treated appropriately, not only will you see the severity and the frequency come down, but you will actually see patients just losing symptoms off their symptom list.

So that is really my guide. My guide is that we are constantly seeing a reduction in severity, frequency, and overall symptoms. And then, you know, it depends on the person.

I will track, you know, some standard blood work that looks at immune function, looks at inflammation. You know, so like, let's say in the beginning, somebody's CRP or high sensitivity CRP, you know, was elevated or their lymphocytes were low, or their natural killer cells were low, or their white blood cells were low, or their liver enzymes were elevated.

So you're not gonna see this in all of the patients, but for patients that started out with some of these things off, I will periodically look at those to see that all of those are normalizing as well.

And then, you know, in the end, when patients are symptom free, I will actually look at antibody testing again. And what I'm looking for is to see that all of the IgM's are now negative.

which to me would suggest active infection. And I've seen patients with positive IgM's, you know, 10 years after being infected. So it's not the typical, you know, immunology where IgM's are only present for the first, you know, one to three months and then it transitions into IgGs and then IgGs stay chronically elevated.

It's not like that with Lyme because Borrelia has the ability to change its forms. And when it does, the immune system can think that it's a new infection again.

And so it will increase like an IgM production to the various proteins that Borrelia has, for example. But that's a little bit too, I don't want to go down that rabbit hole.

But I'm looking for IgM's to be cleared. And then if there are IgGs there, I would want them to be very, very low, you know, where I could be convinced that that's a memory cell.

So like if you're using igenex and you see someone with IgGs, you know, to like the 23, 31, 34, 83, 93, etc., like these really important proteins, If we see a plus or two pluses or three pluses, or if you're using another lab like Vibrant that gives you the actual number, you know, when we're seeing 15s or above, to me, that's not memory cell.

You know, if we have something that's like maybe an 11 or a 12, you know, maybe even up to a 13, okay, that could be memory cell. But we're looking to make sure that if there are antibodies there, there are not IgM's and that the IgGs are lower.

And I mean, that's really what guides me, but I would say it's more a patient's symptoms and the resolution of their symptoms. Got it. Got it. So many Lyme patients also have MCAS, which is the mass cell activation syndrome, dysautonomia, and limbic, the limbic over activation.

How do you stage care so that the nervous system is calm enough to tolerate therapy? So a lot of times patients have to have some sort of external support.

So in my clinic, we have a Lyme literate psychotherapist. She does EMDR. She does hypnotherapy. You know, she does a lot of things to help to calm and retrain the brain and help to you know, kind of get out of those neural networks that are keeping people stuck, you know, in like this PTSD or fight or flight.

But to your point, this is very, very important. And I've had a lot of patients where, you know, not dealing with their stress, not dealing with their trauma, not dealing with the dysautonomia is like literally what keeps them stuck and sick.

And I think what's important to realize is like if we are stuck in fight or flight, that is not your rest, digest and repair branch of the autonomic nervous system.

And when fight or flight is on, everything else is off. So, you know, there's a multitude of things out there that one can do to help. get them out of this dysautonomia, a lot of them have to do with stimulating the vagus nerve.

And so there are devices. I mean, I can't say that there's one that I have seen that I'm totally in love with, but there are devices that you can place on your neck to help to stimulate the vagus nerve.

we have something in my office that I love called Brain Tap. Brain Tap has lights that flash, it has binaural beats, and then it plays a guided meditation.

I find that very, very helpful because a lot of my patients will say, I can't meditate. I lay there and my mind starts to wander and I get even more stressed out.

A lot of times having something that just takes over for them is really helpful. But for patients that can, trying to meditate, doing deep breathing exercises, humming, singing, you know, things like that will stimulate the vagus nerve.

And then there's, you know, there's anti-hoppers wired for healing. There's primal trust. Like, there's all of these other actual, like, programs out there that one can do, you know, to try to deal with that.

And then, yes, MCAS is an issue. A lot of patients have POTS and a multitude of other things going on that need to be dealt with simultaneously.

Tracking Progress and Managing Symptoms

So when I look at this from a functional medicine perspective, a lot of this comes back to the gut. A lot of it comes back to detoxification, healing the gut.

And so for me, it's like, well, you can't do that without addressing diet and addressing food sensitivities and whatnot. I see a lot of patients. In fact, I have more than a handful of patients who have come to me with idiopathic hives.

That has been their main complaint, you know, on a ton of histamine blocking pharmaceuticals and allergy meds, yet they're still breaking out with over a hundred hives a day.

Thank you. Every single one of these patients tested positive for some sort of vector-borne disease. And as we treated that underlying vector-borne disease, along with their gut dysfunction and their MCAS, finally, you know, after years and years of nothing helping, having that idiopathic hives go away and having the patient not need to remain on any sort of histamine blocking drugs too, which is huge.

But you know, I would say whether you're the person that's breaking out head to toe in hives, or if you're the person that just has like, you know, some nausea and dizziness from MCAS or anywhere in between, you know, I would say that there's some level of it in almost every single one of my vector borne disease patients.

And it has to be dealt with, but again, it's kind of like you're dealing with all of this together from a functional medicine perspective. Right, right.

What are your non-negotiable foundations, like sleep, protein, minerals, light, movement, breath work, that make everything else work better? everything you just said.

Okay. No, I mean sleep is so important, you know, for so many reasons. A lot of our repair and our detoxification happens at night, especially for the brain.

And if we're not sleeping, our body really doesn't have like the foundation for the immune system to function properly. But it's a catch-22 because a lot of my Lyme patients have insomnia or disrupted sleep or they're waking up all night or they feel like they're never really getting into that deep sleep.

And some of that, you know, can be because of the brain inflammation, but some of that can be because the infection and some of the pro-inflammatory cytokines and enzymes that the infection stimulate actually mess with the tryptophan, serotonin, melatonin pathway.

And instead of making serotonin and melatonin, We are making quinolic and kynuric acid, which are two neuro-excitatory toxins. And if we're not making serotonin, we're not happy.

We're depressed. And if we're not making melatonin, we're not sleeping. We're awake. So, I mean, we could have a whole conversation about sleep, but sleep is so important.

Food is very important, you know, lime specifically breaks down collagen and robs a lot of our micronutrients, so does mycoplasma, so does bartonella.

So making sure that we have the nutrients that our body needs to build us the way we need to be built as well as make our hormones and our neurotransmitters and our immune cells.

All of these enzymatic reactions rely on various vitamins and minerals. And if we don't have them in our body, because our guts are inflamed and we're not digesting and absorbing properly, or because these infections are kind of eating up our micronutrients, you know, and our protein and our collagen, we need to really make sure that we are feeding ourselves, you know, what our bodies need to function properly.

And that's a biggie. And I do a lot of individualized nutrition. I don't do a lot of blanket statements, but the one that I will say is no dairy, no gluten, no sugar, really no processed food, because those things are going to make us more inflamed and they're going to make our guts leakier, which impairs our ability to detox and causes more inflammation and more immune dysregulation.

So I would say diet and sleep are probably two of my biggest lifestyle pillars that we spend a lot of time talking about and paying attention to. Yeah.

How do you sequence gut restoration in complex cases without provoking a major Herck's reaction or other setbacks? So I usually start out with identifying what foods the immune system has made either IgG or IgA antibodies to.

Nervous System Support, MCAS, and Lifestyle Foundations

And I will start by eliminating those foods. And then also I'll do an intracellular micronutrient panel to evaluate what micronutrients the body is missing.

So what are we getting from diet? What are we not? And then I spend the first, let's say, four to six weeks really focused on giving those nutrients as well as decreasing the foods that are furthering that pro-inflammatory cytokine cascade.

And then depending on the level of leaky gut, you know, I will add in sometimes like demulcin herbs, or if they're deficient in glutamine, I will use glutamine.

But, you know, really looking at, you know, what needs to be done to help repair that lining in the gut. And just replating nutrients that are deficient and getting the foods out that are wreaking havoc goes a really, really long way.

So with almost every patient, that's what the first four to six, sometimes eight weeks looks like. And then I will move on to the anti-inflammatory herbals.

And for some patients, I will also use the antimicrobial herbs at that point. If a patient is really toxic, has a really inflamed gut, or they report to me that they're one of those very sensitive patients that reacts to everything, then I will usually stage their herbs in two.

So starting with the ones that have the more calming anti-inflammatory actions, and then saving the ones that I would consider to be more of like the killers, maybe for like sometimes week 10 or week 12. Got it.

Of treatment. Right. Because I would argue that you can only get so far in healing the gut if you have an infection that is causing further dysbiosis and further immune stimulation and further inflammation, right?

So you can only get so far without actually addressing the infection itself. Right. Right. And what about screening for like mold and water damaged buildings?

How do you, or at what point do you start layering that in as well? So because of the way that the body excretes mycotoxins, like it is actually a detoxification process.

So if the patient already comes in with a mycotoxin test or knowing that mold is an issue, then we kind of start dealing with it right away too. And I can come back to that in a second if you'd like.

But if a patient hasn't been tested and you might find this surprising, I don't test right away because If the body is missing what it needs to properly detox, the patient could actually be holding on to mycotoxins and not detoxing them.

So I don't want to waste their $350-ish on a test that might not give us an accurate result because they have issues detoxing. So, you know, if they're missing micronutrients that are needed to run phase one, phase two of detox, or, you know, like, let's say their routes of elimination are not up to snuff, then we could get false negatives with mycotoxins.

So I will evaluate, you know, but usually not until we're a good three months in. Okay, got it. And then which objective markers, like labs, heart rate variability, strep counts, inflammatory markers, actually correlate with patients feeling better in your experience?

So, I mean, other than the labs that I already spoke to you about, I don't really look at any of that. Okay, okay. Like if a child has pandas and you're looking at, you know, some of the various strep markers, you know, that is helpful to go back and watch them in the end, but that would just be for a child with pandas.

And again, I don't really look at the other two. Okay. Okay. And then a question about hormones. How do you think about pregnenolone, DHEA, thyroid support to stabilize energy and neuroinflammation without masking signals?

So our hormones obviously are very, very important and really govern a lot of the immune system's functions and processes. Even going to the sex hormones like estrogen, progesterone, testosterone, whether you're male or female.

And that is part of like what I call my background or foundation work. So I'm always looking at people's thyroid levels and not just a TSH and a free T4.

You know, we go through and we look at free and total T3 and T4. you know, as well as TSH, reverse T3. I look and make sure that there's no thyroglobulin antibodies or thyroid peroxidase antibodies.

So it's a very, very full evaluation of the thyroid, you know, as well as looking at all of the adrenal and sex hormones. So looking at pregnenolone levels, looking at DHEA, estrogen, progesterone, testosterone, et cetera, and making sure that they are all within the optimal ranges, because again, this really governs all of these other metabolic and immune processes in the body, and they're just as important as any other piece of the puzzle.

Got it. As far as adjunct therapies, you mentioned the BrainTap, which I also really love that system as well. What other things do you use like sauna or PEMF, photobiomodulation, which has kind of earned a permanent place in your toolbox?

So in our office, we have the Viteris 320 hyperbaric oxygen chamber. We also have the PEMA mat from Cloud. We have near-infrared and far-infrared and full-spectrum red light.

And we have a far-infrared sauna. And then we have the Brain Tap. So those are the therapies that I feel are most helpful and I have actually brought in-house.

Great. Getting back to some MCAS, what's your approach to MCAS in the context of chronic infections? Like, where do you start and how do you know when to progress?

So there's a lot of nutrients that are involved, you know, with MCAS and the mast cell and being able to kind of like stabilize it.

Gut Healing, Mold, and Hormone Support

So again, number one, I think doing this intracellular nutrient panel is so important, again, because we're seeing what does the body have? What does the body not have optimal levels of?

Because giving someone more of something that they already have isn't helpful, really. But I kind of look at it, I'm going to say, in about four angles.

So number one, we have stabilizing the mast cell. So if the mast cell has its outer membrane very, very thin, then it is going to degranulate and release histamine as well as other pro-inflammatory cytokines much, much easier than if the mast cell has a more thicker stable membrane.

So using bioflavonoids, using vitamin C, using quercetin is very, very helpful to stabilize the mast cell and to try to build up like the strength of its membrane.

Then I would say number two, using proteolytic enzymes or other nutrients or herbals that kind of act as like a proteolytic enzyme would to help to kind of like break down the histamine that's somewhat I would call it like free-floating, right?

Then using anti-inflammatory herbals like Chinese skullcap, Japanese knotweed, and cordyceps to help to shut down some of those pro-inflammatory cytokines that can be released from the mast cell as well.

And then using things, if necessary, to block the histamine receptors. So that's kind of like the four categories, I guess, that I would look at for intervention.

But then also, you know, coming back to the basics and really eliminating the foods that are also acting as triggers. And so, you know, we can look at low histamine foods and try to focus on eating a majority of those.

And a lot of that goes into food prep. So not eating food that's been cooked and sitting around for days and days as your leftovers, because as the food sits, it will build histamine, especially the proteins.

And then looking at the foods that are really, really high in histamine and maybe trying to either eliminate those or decrease the frequency of those foods.

But really coming back and helping to heal the gut and repairing the gut lining and getting diversity in the microbiome goes a really, really long way at healing mast cell issues.

That's great. That's great. When do you consider that ongoing symptoms are less infection-driven and more about immune dysregulation or mitochondrial dysfunction?

And how does that pivot your plan? So, honestly, it doesn't, because I'm going to keep someone on their antimicrobial protocol until I feel the immune dysregulation or imbalance has been corrected.

And so I don't really switch gears from like, okay, like for these months, we're going to tackle the infection and for these months, we're going to heal the gut.

And then for those months, we're going to rebuild the immune system, you know, et cetera. In my opinion, and the way that I approach it is one big giant ball of wax.

Because there's so many downstream and then upstream effects, you know, that all of this, this has together, you know, and so we kind of have to look at the person as a whole.

We have to look at all of the pieces of the puzzle, you know, their terrain. and what's being affected, and we have to have treatment be friendly, you know, and tackle all of that so that we can heal the person as a whole and we're not just running around chasing symptoms.

You know, so really when the patient is symptom free, and I do mean symptom free, and they've been able to maintain that for two solid months, then I will go back in and do sort of my checks and balances to make sure that anything that's suggested immune imbalance is no longer there, you know, on the labs, anything that suggested unmanaged inflammation, you know, any of these nutrient imbalances, hormone imbalances, food sensitivities, right?

Like if we've healed the gut, there really shouldn't be any IgG or IgA food sensitivities anymore. Zonulin levels shouldn't be high. And, you know, if you do something to evaluate the gut, like whether it's a GI map or a gut zoomer or something like that, you know, you should see all of those pro-inflammatory markers as well as the leaky gut markers, you know, all normalized.

And if not, then we need to keep going because the gut and the microbiome is crucial to healing the terrain of the body and fixing the immune system. Yeah, yeah.

And how do you coach patients to track progress meaningfully? Like, what should they be measuring every week to see real-world gains? So a lot of my patients, when they come to me, have been running around like chickens with their heads cut off.

They've been gaslit. They've been told they're not sick. They've been told it's all in their head. There's nothing wrong with them. They don't know what they have, but it's definitely not Lyme disease, right?

Like all of these things. A lot of my patients have to be their own advocates or the advocate of their child, husband, wife, et cetera. And a lot of the patients that I see these days are really, really sick.

So I actually advise patients not to track their symptoms. I want patients to focus on doing things to soothe their vagus nerve, to relax, you know, focus and do visualization on their body's healing or get back into doing something that they love.

But I want them to stop searching. I want them to stop tracking. I want them to get out of, unless they have a really good support group. But a lot of these support groups turn into almost like a misery.

And I just really try to have patients get back to living their life and finding something to be grateful for and doing things that feed their soul as opposed to tracking symptoms and running looking for answer after answer after answer.

Because that keeps you stuck in that fight or flight. It keeps you stuck in that I'm sick and I'm a victim.

Adjunct Therapies and Spike Protein Detox

And that's what I really want to help patients pull themselves out of. So what myths about Lyme and integrative care would you like to most retire? Oh, that's a big one.

Well, I guess, oh, so here's one that really, really upsets me. Taking one dose of doxycycline at the time of a tick bite doesn't cure anything. It doesn't do anything.

It's based off of one study. It was so very, very flawed. Please do not accept that from your medical provider. It will do nothing for you. Got it. That's a great one.

Number two, 14 days of doxy is not going to cure Lyme disease, even in an acute setting. You're lucky if 21 days does. The International Lyme and Associated Diseases Society recommends four to six weeks of doxycycline, 200 milligrams twice a day.

Most doctors are only prescribing 100 milligrams twice a day. That is ILAD's recommendations for acute Lyme disease. We need to stop calling it Lyme's and we need to stop lumping all of these co-infections that are caused by not only different types of bacteria, but different genus and species of bacteria into the diagnosis of Lyme disease.

Like, lime is specifically the species of Borrelia that cause lime. Then we have the species of Borrelia that cause tick-borne relapsing fever. Then we have a completely different bacteria, right, causing Bartonella or Babesia or Anaplasma or Ehrlichia or…

rickettsia causing Rocky Mountain spotted fever, mycoplasma, chlamydia pneumoniae, right? There's all of these other things, but people just want to kind of like throw it into one category and call it limes.

And really like that's part of the confusion in the medical community, right? So we need to be more scientific and correct with that and call these organisms for what they are.

And it's not even really tick-borne disease anymore. It's vector-borne disease because these things all can be transmitted by vectors other than ticks.

Right. Right. Well, can you share a memorable case turnaround? What finally unlocked someone's progress and what did it teach you? Well, like I said, most of my patients, almost everybody that I see these days, does have vector-borne disease.

I think one of the things that I'll share in this isn't just even with one patient. So since COVID, we now have to deal with the spike protein. And I've had a lot of patients who were quote unquote in remission.

And that's as far as I'll go. You'll never hear me use the cure word. But like their Lyme was in remission. What do I mean by that? They had been off their treatment for several years and never had return of symptoms.

And then all of a sudden during COVID and especially after the COVID vaccines and boosters coming back into my office saying all of their Lyme symptoms are back.

So the COVID spike protein and the damage to the immune system and the body in the pro-inflammatory cytokine cascade that it ignites is very, very real.

It overlaps with that of all of these vector-borne diseases, and it makes the body more hospitable. So getting on a good protocol to help you to break down and detox the spike protein is often necessary in my patients that have been vaccinated for COVID.

or a patient that just gets the SARS-CoV-2 virus and has acute COVID, that can kind of set back their treatment a little bit. And often I will have to use a combination of natokinase, bromelain, curcumin, and quercetin to tackle that spike protein, you know, in order to kind of settle that piece down.

And a lot of times it can take a solid three months. I did an amazing interview with Dr. Peter McCullough and he is a huge advocate. He has his own version of the spike protein detox formula that you guys can look up.

But also he talks a lot about knowing your number, like knowing your spike protein antibody number. And this is a test that patients can order on themselves through LabCorp for about $64. And it's really worth knowing your number because it can tell you if you're in the danger zone or not.

And if you're in the danger zone, You know, doing a spike detox protocol is super important, just in wording off, like, chronic inflammatory diseases.

Resources for Clinicians and Closing Remarks

That's great. Yeah. That would be really useful. For clinicians listening, what skills or mindsets are essential to treat chronic Lyme well, and where should they start?

So I would say definitely with ILADS, with the International Lyme and Associated Diseases Society, they have their annual four-day scientific conference every year.

They also have a ton of webinars on their site that's available. If it's for a child going to the Medical Academy of Pediatric Special Needs, or MedMAPs.

And so by the way, it's MedMAPs.org, and it's also ILADS.org. So those two places, I guess I should plug my own conference. I always forget. So I put together something called Lime Bytes and the website is limebytes.com.

So that's L-Y-M-E-B-Y-T-E-S dot com. We do an annual symposium. This year, we're looking at Lyme and other vector-borne diseases, obviously, but also lung COVID, COVID vaccine injury, PANS pandas, as well as mold-related illness and kind of like how they all converge because, let's face it, a lot of patients are dealing with all four of those things.

And we have tons of resources on the website, you know, from patient grants. So there's actually foundations that can help patients, you know, get money to get a proper testing and diagnosis and treatment, as well as lectures from the past five years, LimeBytes conferences.

And these are all doctors that really practice functional medicine. It's a mixture of MDs, DOs, and NDs that are typically presenting at LimeBytes. That's great.

And we'll definitely put all of that information on our show notes for everyone, including your website as well. So, well, thank you very much for joining us.

I really appreciate all the wealth of information and thanks to everyone for joining me on The Functional Edge. I hope today's episode gave you fresh insights and practical tools to level up your life.

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