## Introduction and guest background

And to me, it's like I would do anything to be able to offer my child a life of normalcy. I mean, if you just look at the disease and the chronic illness in our world today, and I don't say this lightly because I know that it's hard work, but it's like, look, do you want to end up with, as an adult or as a young adult, autoimmunity?

you know, cardiometabolic disease, cancer, dementia. I mean, do you want to end up with that? Because if not, all the things that you and I ask people to do as this foundational groundwork is what every single person in this world literally should be doing for their own health and their own body because most of these chronic diseases are self-inflicted from diet and lifestyle and all of the nonsense that we have been brainwashed to do to ourself in the name of health.

This is Doctor Talks. Real talk from real doctors on the issues that matter to you most. Hi everybody. It's Dr. Nancy O'Hara and I am so privileged to welcome Dr.

Mariah Hinchy to the podcast today. Mariah is an incredible naturopath, a great clinician. She runs a wonderful lecture series conference that this year is going to be in Florida called Lime Bites in November and also is one of the founders of Lime Core, a wonderful supplement, herbal, botanical.

company for all things Lyme and more. So Mariah, thanks so much for being here. Thanks for having me, Nancy. It's always a pleasure to talk with you. Yeah.

So just tell me a little bit first about how you got into this complicated and wonderful world that we're both in. Oh, I just thought it was a great idea to treat one of the most controversial diseases with the most controversial medicine possible, you know?

Yes. Yes, just what we all planned for. That was a good career move for me. No. In all seriousness, as a naturopathic doctor, we are trained to find the root cause of someone's symptoms or illness, as opposed to just managing the disease or treating the symptoms.

With Lyme and other vector-borne illnesses often being The root cause I kind of was forced into it I actually wanted to use all of these amazing you know naturopathic things to to be a longevity and anti aging doctor but so so not what I am and what I do.

## How Lyme and PANS/PANDAS overlap

Well, you do what you do very well. So I'm glad that this disease nipped you in the butt and got you involved. And you know, this podcast is demystifying pans and pandas.

But when we talk about Lyme disease, or as you said, vector borne diseases, tick borne diseases, how is that connected with pans pandas? Well, with PANS, which is, as I'm sure the listeners know, the overreaching umbrella that includes everything, including pandas, really any infection can bring about PANS, as well as metabolic disorders, toxins in our food, in our environment.

And really, I kind of think about it as straws on a camel's back. So when you have all of these insults, whether they be infectious or toxic or metabolic or even genetic, it's like there's a final straw that kind of breaks the back of the immune system.

And I think the key thing that links them all together is really these are all immune system dysfunctioning. Absolutely. Yeah. Yeah. And that lack of immune tolerance that, and I say this again and again to parents, it's not about that your child has 10 infections, is that your child has immune dysregulation that doesn't allow it to handle

anything in the way that we see in other children who are not pegged with this Panda's diagnosis.

Right, exactly. And a lot of them, I noticed that my kids with PANS have a much, much harder time tolerating the treatment. So they're going to be like, you're overly sensitive, react to everything, herxing like crazy, you know, or even, or is it cell danger response, right?

Like, but whatever it is, these kids tend to be the ones that have a harder time tolerating the treatment as well. And you have to go slow and make sure that you're doing all of the foundational work to really prepare their bodies to be able to handle the die off and the detoxification without it causing more of like an autoimmune inflammatory response.

Yeah. And we'll get there. I want to talk about all of that. But I also want to mention, we always hear about Lyme disease. And you and I both, as part of ILADS, the International Lyme and Associated Diseases Society, and in the work we do, want to change that moniker to vector-borne diseases, because it's not even accurate.

But we talk about Lyme and co-infections. Can you talk a little bit about what those are and differentiate between all three of what I call the big three, the Bartonella, Babesia, Borrelia?

Yeah. So with Lyme disease, it's called Lyme disease because this cluster of children who were having arthritis and malaise and flu-like symptoms was in Lyme, Connecticut.

So that's why it's called Lyme disease, and really it refers to the microorganism called Borrelia. And so the original Lyme Connecticut species was Borrelia burgdorferi, but we now know that there are a multitude of other species of Borrelia that cause Lyme disease as well as tick-borne relapsing fever, which to me, I just look at as another form of Lyme disease.

## Tick-borne infections and hallmark symptoms

So just kind of like FYI, everyone who's listening, you need to be tested for all of those species to be able to thoroughly rule out Lyme disease. And PS, it's a clinical diagnosis.

So testing is just a piece of the puzzle. It's not the end all be all, you know, you're positive or you're negative because of your lab. So sorry, I digress.

No, no, no. But I think that's a very important point because that's one of the take-home messages of everything we're doing in this podcast, that this is a clinical diagnosis.

We may be able to prove it with appropriate lab testing, but negative lab testing doesn't disprove it. Right. Exactly. And I think that goes for all things Pans Pandas and all things tick-borne disease.

A hundred percent. Yes. Okay. Okay. And so I think that some people get into the bad habit of saying Lyme disease and they mean Lyme and all of the other organisms that go along with it.

And so, you know, if we want to be technical, Lyme is just Borrelia. So then we have Babesia, which is actually a parasite. It's the cousin to malaria.

We have Bartonella, which by the way is not just transmitted by ticks and it's kind of up for debate if even lime is only transmitted by ticks. But we know for fact that Bartonella is transmitted through fleas and mites and lice and you know, other insects, I guess if those are insects, right?

Yes. Other, other routes. And then there's also vertical transmission as well. So it can be transmitted through the placenta, you know, from mother to child and utero.

So, you know, Bartonella is a bacteria and- But not to forget cats and cat scratches and cat saliva and all that too. Just wanted to mention this. Yeah.

Keep going. Yeah. Bites of, bites of animals. And then- There's mycoplasma, there's Ehrlichia, there's anaplasma. These also are other bacterias as well.

Then there's the Powassan virus. Then we have the immunocompromisation that all of these things cause. A lot of times can cause the reactivation of Epstein-Barr and increased titers of all of the herpes family's viruses.

It's like there are the co-infections that can be transmitted by the same vector, but then we can end up with this my loo of other opportunistic infections that are already in our bodies that can re-emerge and overgrow that now almost become co-infections as well.

But sticking to the three B's, so that would be Borrelia or Lyme, Bartonella, and then Babesia. So I would say the hallmark symptoms of Babesia, which is a parasite, would be perfuse sweating at night or during the day.

And oftentimes it can be drenching. There can be severe pressure headaches. There can be this weird like tipsy or dizziness, not vertigo, not where you're spinning or the room is spinning, but it's almost like trying to walk when you've had too much to drink.

Like the floor is uneven. There can be a lot of weird cough, shortness of breath. Classically, it's called air hunger, a lot of frequent sighing, there can be a lot of anxiety, rib pain, like severe intercostal pain sometimes.

And to me, those are the hallmarks of babesia. Am I forgetting anything? No, I think that's a very complete list. And the only thing that I would add that goes along with that, that when you just had your wonderful Healer Summit that I lectured about a little bit and that I'm lecturing about at MAPS, is the Alice in Wonderland syndrome.

That distortion of the way the child is seeing, hearing, feeling, sensing the world. And it's in the realm of dysautonomia, you know, that dysregulation of the autonomic automatic nervous system.

But I think that that whole piece that goes along with the sweating and the air hunger and all of that is part of something we need to add to our babesial list.

Yeah. And what we often call that in my practice is like that derealization. Yeah. Yeah. Okay. So then with Bartonella, I would say the classic. So instead of having like this global pressure headache, it can feel more like sinus headaches, or it can even be like an ice pick headache.

A lot of times in the temples, there can be a lot of sensory overload. So you're, you're all of a sudden like very sensitive to your world. So light sensitivity, sound sensitivity, You cannot tolerate the sheet touching you or someone touching you.

It's like every little thing hurts. You're hyper reactive. Buhner talks about homicidal rage, which is a really real thing in the world of Bartonella.

A lot of anxiety, panic attacks out of nowhere, especially when you've never had a panic attack before in your life. There is obviously the striae rash that looks like stretch marks or like tiger scratches.

You can have painful soles of your feet. And a lot of times there are more central nervous system or brain symptoms.

## Herbal treatment philosophy and immune recovery

So in addition to the neuropsychiatric emotional behavioral stuff, there can be a lot of cognitive decline, confusion, early onset dementia, Alzheimer's, things like that with Bartonella, ADHD in kids, seizures, a lot of neuropsychiatric issues with Bart.

Oftentimes they, especially with kids, far outweigh the physical symptoms. And then with Borrelia, it's like there's no system in the body that's off limits because it infects every cell.

And so therefore it's going to affect every system in the body, every organ, every organ system. And I would say with Borrelia, again, that's Lyme, it's this cyclical, but intermittent.

So like it comes and goes, but it comes and goes in cycles and it ping-pongs around the body from system to system. And people literally start to feel.

like their bodies are self-destructing and like they're going crazy because one day something hurts to the point that you're like, did I tear something in my knee?

And then literally two days later it's gone and you think you tore something in your shoulder, right? Or you're having urinary incontinence or heart palpitations.

It's just so bizarre. And one of the hallmark symptoms is like your immune system just seems to be getting worse and worse with time. You don't respond to the treatments that you would typically expect someone to respond to.

And you're not healing in the way that you would expect to heal from an injury. Yeah. Yeah, I think those are very, very complete lists. And for many of the families listening seem totally overwhelming, I'm sure.

But one of the things I love about you and that you have taught me so much about is your approach to treatment of vector-borne diseases. And that includes herbals and botanicals.

And so talk a little bit about your approach to treatment because although it's complicated, treating in this way is not just safe, it's also incredibly effective.

Okay. So I think the biggest thing is that when I'm working with a patient or a client, my focus is on restoring the immune system's ability to function properly.

So through the effects of inflammation, the immune system becomes compromised and it's not able to see the infection and know how to get to it and eliminate it.

This goes beyond the fact that, for example, Borrelia makes biofilms or little forts that it uses to wall itself off from the immune system and from medications, but the way that it actually sort of like breaks the balance between the T helper branches of the immune system and in often cases suppresses our body's ability to actually make antibodies.

So instead of our immune system acting like a sniper where, you know, it can kind of put the red dot on the target and it safely eliminates that target without getting anything else caught in the crossfire, it turns into like the plane that's flying overhead and it drops a bomb on the target, but everything else in the vicinity, meaning our bodies kind of get like blown up in the process.

And that to me is sort of like that autoimmune type immune dysfunction. And so, you know, I was always taught there's no antibiotic that is ever going to take any infection from the trillions of organisms that are causing the infection down to zero.

The antibiotic through various mechanisms will stop an organism from replicating or it will shrink its load down to the point that the immune system is able to then take over and completely eliminate it.

So I feel like when you are focused on just killing the infection and you're not recovering the immune system, you're going to have that old cliche, once you have Lyme, you always have Lyme.

And when you go on antibiotics, it shrinks the load and therefore improves symptoms. But as soon as you stop, it grows back and then symptoms come back.

and then you end up back on the antibiotics, et cetera, et cetera. So of course, there is a component that has to be focused on eliminating the infection, but it has to be using things that are not going to cause further havoc in the

body and destroy the gut microbiome in the process.

So I would say 75% of my focus is on restoring proper function to the immune system and to the body and basically recovering the immune system so that as we're shrinking the infectious load, in the end, the immune system can come back in and work properly and either hold the infections in remission or completely eradicate them from the body.

Yeah. And I think those are all incredibly great points. And true of all of PANS, in that if we just focus on giving an antibiotic for strep or mycoplasmo, or even if we're smart enough to give an antiviral for viral-induced PANS, we're missing the immune dysregulation.

And especially with vector-borne diseases, not only are we missing treating the immune system, those diseases are causing more immunodeficiency. And part of our problem is when we're testing, especially through conventional labs, we're usually testing antibody responses, immune system responses.

And if we're causing The immunodeficiency, how do we expect the immune system to show the response?

## Modified citrus pectin and Galectin-3 support

Exactly. Yeah. So why herbals and botanicals or which herbals and botanicals? Tell me some of your best ones and why. Sure. So the why to me is number one, there have been so many studies now over the past roughly four to five years showing the effectiveness as an antimicrobial.

So there was one study by Feng in 2020 that showed that A handful of herbs, which included Japanese knotweed, Chinese skullcap, Cryptolepis, Sweet Annie, were four of the six, had just just as an effective response as I believe it was doxycycline and sepharothin at eradicating the pathogens.

And then it went on to show that these herbs actually were effective in treating the persister cells, which antibiotics typically used are not. Now there are antibiotics like flagell or tinindazole that can be put into the mix that are effective against the round body or the cyst form.

And then also you can use something like grapefruit seed extract, but it's just so promising to see these studies come out showing how effective these herbs are as antimicrobials.

But then if you look at the side benefits of the herbs, which is that most of them are anti-inflammatory. And again, inflammation is at the heart of the immune dysfunction.

Then we have, so I would say like my favorite anti-inflammatories are Japanese knotweed, Chinese skull cap, red sage. Then we have herbs that balance the T helper branches of the immune system like ashwagandha and rhodiola.

Then we have the herbs that actually inhibit the breakdown of the extracellular matrix and the collagen, which allow this infection to feed itself and spread throughout the body.

which are the combination of ashwagandha, Japanese knotweed, and Chinese skullcap. Then we have a lot of these herbs that are also antioxidant, and then other side benefits not necessarily useful like in our treatment goals dealing with pans, pandas, or vector-borne disease, but a lot of them are anti-cancer and anti-tumor, and anti-aging at a cellular level.

So there's so many side benefits instead of harmful side effects when using these herbal antimicrobials. Yeah, yeah, so true. And one of the other interventions that you and I both incorporate all the time is modified Citrus Pectin.

Yes. Not an herbal, so to speak, but certainly an intervention that we find very helpful. And can you talk about that one just a little bit and its effect on Galactin 3, et cetera?

Absolutely. So really, really quick, Galactin 3 is basically this molecule that when you have an acute injury or an acute infection, it goes up to basically call in all of the immune cells to basically kill the infection or heal the wound, so to speak.

But when it stays elevated long term, it actually can cause fibrosis, it can cause an overreaction of the immune system and prolonged inflammation that can lead to autoimmunity.

It also helps to make biofilms, which again are kind of like the little forts that various bacteria use to wall themselves off from the immune system, as well as medications.

And those are the two pretty primary, in my mind, roles of Galactin 3. And Galactin 3 is also seen in cancer and cardiovascular disease and a whole bunch of other metabolic disorders, not just in inflammation and infection.

But when it comes to this specialized form of modified citrus pectin, not only does it help to decrease the Galactin 3 levels and turn off that chronically elevated alarm that's overdriving inflammation and immune dysfunction, but it helps to increase natural killer cells or CD57 cells, which are a subset of lymphocytes that Borrelia specifically lowers, it helps to decrease two of the pro-inflammatory cytokines, interleukin 6 and interleukin 1 beta.

## Getting herbs into kids and LimeCore Botanicals

It helps to break down the biofilms. And in the process, a lot of times we have excess iron and heavy metals in the biofilm. And so this specialized form of modified citrus pectin can actually bind aluminum, mercury, cadmium, and arsenic.

and help to pull that safely out of the body. It binds the LPS or lipopolysaccharide, which is a portion of the outer cell membrane that actually is responsible for the Herxheimer reaction because it drives inflammation.

So we can bind LPS and decrease the severity of a Herx using the modified citrus pectin. It also helps to bind mycotoxins as well. and it promotes healthy collagen formation and we know that collagen is the primary target and food of Borrelia because it contains the exact nutrient profile that these organisms need to live inside of the body.

Yeah. So have we given everybody enough reasons to add Pectisol or a G3M Lime or any other modified Citrus Pectin to their formulation? Because it really does so much, no matter what the underlying trigger is for you or your child.

It also makes the taste of the herbs so much more palatable. Not that I would say to spend that much money on something to make something palatable, but without having to add juice or other, you know, sugar laden things, you know, so we have a joke in my practice for adults.

It's a limerita because literally that it tastes like a margarita or for kids. limeade, you know, and we just, we have fun with it. And it's a good way to really mask the, the not so great taste of the herbs.

Yeah, absolutely. And speaking of which, before we get to a couple of other things, do you have any other tricks for getting the herbs in? Because that is something we're all asked about in children, you know, how do we get this nasty flavored stuff in?

We've talked about lots of tricks on this podcast, but I'm just wondering if you have any. Yep. So I mean, if you have to go to juice, I always say like kids are so smart and they notice everything.

So use a dark colored juice, you know, so organic purple grape juice, just two ounces. And again, I would use the smallest amount because no one wants to drink a big glass of anything.

So something I learned from you, you know, you can, suck it up in a syringe and squirt it down the back of the throat, missing the taste buds and then have, you know, like a little chaser of something.

I was doing that with my son for a while and he said, oh, mommy, can't I just drink it? Yep. And I was like, sure. And so, you know, my husband walks in as my son literally has a shot glass of his herbs and his coconut water because that's what he wanted to use to, you know, to wash the taste down.

I've had parents mix it into pouches, you know, like into like a healthy fruit pouch, but honestly I give the kids way more credit than most parents give them.

And a lot of times it's like, can you just mix it with the G3M, put it in a bottle, put it in a sippy cup, put it in a glass and just give it to them.

And a lot of times they will just drink it with no, and the parent's mouth is like wide open. And I have video upon video upon video that has been sent to me of kids of all ages taking it.

Yeah. Yeah. And I think that goes to including the kid in, hey, you got to take this. This is, you know, not negotiable, but these are the ways we could do it.

I can put it in a syringe and put it down the back of your throat. I can put it in a shot glass. You can take it however you want. You just got to take it and then we'll go do something fun.

You're going to take it. How would you like to do it? Yeah. And, but, you know, I love, you know, Limecore, which is a company that you founded that provides a tremendous amount of liquid supplements, tinctures, et cetera, but also has some of these in pill form, Japanese knotweed and cat's claw, and now Cryptolepis.

And talk a little bit about Limecore for a minute, just about what you provide, how people can find it, how you started it even, whatever you want to talk about about it.

Yeah, well, I got to tell you, it definitely was not in my wheelhouse or in my vision to own a supplement company, not really anything that I wanted for myself.

Out of frustration on my ex-business partner, but still very good friend and colleague, Dr. Frank Aida and I, when we were both suffering from Lyme disease ourselves, and were treating patients and constantly having things go on backwater and not being able to find clean, potent sources of our medicine, we decided to take matters into our own hand and we started Lyme Core Botanicals.

There's nothing more heartbreaking than to see a patient finally making progress and then have to stop their treatment because it's not available anymore.

So there's a lot of other companies now, but back when we started this in 2011, 2012, there really weren't. And my goal is to kind of have everything in one place that I would consider necessary to treat any of these complex, chronic, infection-driven illnesses.

Yeah, and great resource, great products. I always feel very comfortable recommending them because I know they're well vetted, top quality products. So thanks for doing it.

I'm glad Necessity made you have to start it because it's great.

## The 10 B's framework for treating chronic infections

And especially for our teenagers or our kids that go to college that really can't get their head around mixing all these tinctures and being a mad scientist in their dorm room.

um having the pill form of these it really helps them to be even though it's not all of them it helps them to to be more on board with their program yeah it helps compliance and i mean i say this all day long compliance is key you know being compliant getting everything in the number of times of day that you need you know depending on what it is and doing it every day really is what makes this work Yeah, absolutely.

Now, you know, I learn by pictures, by monikers, et cetera. And one of the things going back to how you treat Lyme disease or vector borne diseases is that 10B list that you shared.

I don't know. It may have been years ago. It seems like several months ago that I reshare and credit to you all the time. And I was wondering if you could just go through those 10Bs and what you mean by each one of them.

So everybody understands the thought process with tick-borne diseases. Sure. And now these aren't necessarily meant to be done in the linear model that I'm going to put out.

There's a lot of things that you're doing together. But we start out, number one, background check. And really this goes into kind of like the basis of functional medicine or naturopathic medicine.

So We can't expect, for example, to be able to just fix the immune system using herbs if you are missing the fundamental nutrients, for example, to be able to make an immune cell.

So looking at all of the micronutrients that your body needs, not just for your immune system, but to be able to run all of the biochemical processes and the bodies, whether that's making your neurotransmitters or your hormones or an immune cell, like I just said, or running your detoxification systems.

Yeah. We also need to make sure hormones are important, right? Like estrogen and progesterone and testosterone are very important for the immune system's ability to function.

And a lot of these hormonal imbalances can actually cause symptoms very, very similar to a lot of these infections. So the background check is just really going through and making sure all systems of the body are functioning properly.

Thyroid, adrenals, sex hormones, you know, routes of elimination, et cetera, just all of the things in the body. I know I'm not doing this justice, but I think everyone.

No, no, no. I totally. Yeah. And it's asking those questions about sleep, about constipation, you know, those sort of things and knowing that as a practitioner, as well as a parent, so that you're building the foundation basically.

Yeah. Okay and the number two are band-aids. So a lot of patients when they come in to see me and you they're barely functioning. So if we need to use some pharmaceutical or natural and what I mean by band-aids is like we are using this to override that symptom.

Like this isn't root cause this is like we're trying to enhance the quality of your life. Like maybe you do need a temporary antidepressant, for example, right?

Mood stabilizer, something like that. I have patients that come in that are suicidal in the beginning. And so we have to get people quality of life so that not only do they feel like their life is kind of worth living again and they have hope, but sometimes we need to get people out of a danger zone.

And we certainly, at minimum, need to get people to a point where they can work their protocol. Yeah. And I think that is so important because I think sometimes those of us in functional medicine, when we're looking at root causes and treating root causes, we get almost mired down or we forget about treating the most important symptom to the family or child in front of us.

And sometimes that does take something that neither one of us really want the child to be on, but if we can help them to feel better while we do all this other work, that, that helps them as well as helps the work to work better.

Right. And it's always the one symptom too. A lot of the times that is the last one to come out and the last one to heal. You know, if it's, if you're trying to get from a root cause perspective, but all right.

So number three is blocking inflammation. So we want to block the pro-inflammatory cytokine cascade. We want to

block those enzymes and the enzyme activity that's coming from the inflammatory cytokine cascade that helps to break down the extracellular matrix and feed the infection.

Next, we want to buffer the effects of stress on the autonomic nervous system. A lot of these patients are stuck in fight, flight, or freeze, and we need to really get them into rest and digest, into parasympathetic.

The ANS works where if sympathetic is activated, that fight or flight parasympathetic is inactivated. It's like a seesaw. So we have to get patients out of this chronic stress mode.

And we can do this through stimulating the vagus nerve. And there's a multitude of different systems and techniques that we can use to do that. But it's super important because if you are stuck in that fight or flight, your immune system isn't going to work properly.

Right. which brings me to the next, which is balance the immune system. So again, there are various herbs that we can use to achieve this, but also we can This, you know, looking to food, because there's a lot of things in our food that are actually going to suppress the immune system.

So getting off of processed food and sugar and the inflammatory foods like gluten and dairy and getting off of foods that your body has created an IgG or IgA response to.

Those are all things that are either overreacting the immune system or distracting it from doing what we want it to do, which is fight these infections and heal the body.

Right. And so important. Keep going. So number six is building the gut. So the nature of Borrelia as well as some of the co-infections is to through these mechanisms of inflammation, raked out the tight junctions in the gut.

And so this increases permeability and we start allowing toxins that are supposed to be kept in the digestive tract for elimination into systemic circulation and potentially interact with not only the brain, but other vital organs.

We can allow antigenic food particles into the body that can spar an autoimmune response. We can allow pathogens that should be killed and kept in the gut for elimination into the body.

So a lot of people realize that the gut is there to digest and absorb various nutrients, but people forget that the digestive tract is also a sewer system, right?

It's a route of toxins out of the body. And if we start leaking these toxins back in, it leads to more inflammation, cell damage, oxidative stress, et cetera, et cetera.

And it's a vicious downward spiral. So we have to focus on not only healing these tight junctions, but on the diversity of the good, healthy bacteria in our microbiome and the suppression of any overgrown opportunistic bacteria or fungal family matter.

Yep, yep, so key. And part of why we both like herbal so much in that when we're doing what ends up being number 10 on your list and we'll get there, antibiotics, we're not building the gut, we're doing the exact opposite.

So we may have to do more to build the gut if we're choosing or need to use the antibiotics or if the child has been on antibiotics long before coming to us.

Right, exactly. Yeah. OK, number seven, breaking down biofilms. Breaking down biofilms. Again, we need to allow. So the last thing you want to do is spend all of this time focusing on shrinking the infectious load and restoring proper function to the body.

And we ignored the biofilms. And now you have these clusters of bacteria or parasites. hiding out behind the biofilms and when you stop treatment, they basically just come back out.

So we need to use things to dissolve the biofilm so that our treatments can reach these hidden infections, but also so that the immune system can access them as well.

And there are a ton of botanicals that actually are really good at breaking down biofilms. So are proteolytic enzymes. And as mentioned before, so is the G3M-Lime-Pactosol.

Yeah. Yeah. And if anybody missed it, we just recently had a podcast with Dr. Usman Singh, who the whole podcast was on these biofilms. And what an important part that it plays in all of our chronic illness and chronic infections.

If you missed that one, go back and look at that one too. Yeah, it's crazy. I'm sure you guys talked about how various, so it's not like Lyme has its own biofilm and it's just Lyme hanging out there.

It's like, you know, you can get the strep and you can get all of these other organisms and they actually share information about our immune system and teach each other how to further evade it.

Like it's wild. It sounds like we're talking about like some weird sci-fi, you know, movie or something. Yeah, but it's so true. These bugs are so smart and talk to each other, communicate with each other in this trapped little mucus layer.

And when we throw the antibiotics in there without any biofilm busters, without any rebuilding of the gut or balancing the immune system, we're actually causing these germs to say, no, sir, you're not getting me, and talk to the other ones and make it even harder.

It's crazy. Okay. So number eight is bolster detoxification. So this is on so many realms. And I like to look at this as almost like a reverse funnel.

So like before we start trying to detox anything on a cellular level, we want to make sure our routes of elimination are open. Cause the last thing we want to do is dump more toxins into the bloodstream.

and have them back up in the body and cause more damage. We want to make sure that we are pooping, peeing, sweating, breathing at minimum to get rid of these toxins, to have our roots out of the body.

Then we want to make sure that we're supporting phase one, phase two of liver detoxification. We're supporting the kidney's ability to detox. We are supporting lymphatic circulation and drainage.

And once we're sure that all of these things are working, then we can actually go to the cell and start trying to mobilize toxins out of the cell. One of the reasons why detox is so important is like the example of a HERX, which is number nine.

But if we are allowing our toxic load to increase, we're going to be increasing inflammation, increasing oxidation, cellular damage, dysfunction of the mitochondria.

And we're really making the body more hospitable to these infections, as well as increasing the frequency and severity of the Herxheimer reaction. And so I always used to think several years ago, oh, just push through.

It's just a Herx. It's fine. And it's like, even though I still do recommend if, and this is a big, big if, if possible to push through with the treatment and not take a break because we're going to do other things to mitigate basically like what's going on, the pathophysiology of a Herxheimer reaction.

We can't ignore it because what a Herxheimer is, is increased inflammation and acidification of the body. And guess what? That's gonna make you more hospitable to the infections.

Not only does it make you feel absolutely miserable, but it's literally making you worse, right? So I don't like to stop the treatment or pause the treatment or go down on the treatment.

What I like to do is push more natural anti-inflammatories agents of alkalinization to the body, as well as binding these LPS and toxins. And if you go through and you do the foundational work in the beginning and you make sure that the person is detoxing and you've done as much gut healing as you can with an inflammatory infection present, the amount, like the frequency and the severity of herxings will be so much less and so better tolerated.

Absolutely. So agree. And I think we can start low and increase slowly to try to avoid the Herxheimer reactions. But it's the anti-inflammatories, the bolstering the immune system when it happens that we're not doing well enough if it happens.

And then we need to bolster that. Absolutely. And then number 10. Well, I was just going to say real quick, one of my favorite things to try to prevent herxing is chlorella, because chlorella is very alkalinizing, but it's also a weak binder.

And by weak, I don't mean ineffective, I mean gentle. It's not going to suck all of your nutrients and everything else, too. Another wonderful herx support or binder is Smilax glabra as well.

But number 10, and I put this one last because to me it's important, but it's like we shouldn't even be thinking about it until we have gotten the other nine things in place, is blasting the bugs.

So that's using our killers, our antimicrobials, antiparasitics, even antivirals, antifungals, anti-yeast, et cetera. Yeah. And you and I do this so similarly, but often I get asked at that first visit, well, aren't you going to start killing it?

You know it's there.

## Roadmap to healing and monitoring progress

Why are we doing that? And I'm like, we have to set the foundation. We have to do all these other things first. A, it won't work if we don't, and B, it may make them much worse.

Right. And so just to say the 10 one more time, just because I think it's helpful to hear them all and see them in that way. It's the background check, the band aids, the blocking the inflammation with diet, et cetera, the buffering of the autonomic nervous system, the balancing of the immune system, the building up of the gut, the breaking down of the biofilms.

the bolstering detoxification, the binding the toxins and treating the hurts and the blasting of the bugs. And just saying it all, you know, I have to take several breaths, but it also just seems so overwhelming.

But I'd like you to talk a little bit about how it doesn't have to be overwhelming. As long as you're working with a practitioner that's trained at iLADS or MedMaps or whatever, this is doable, right?

It's doable. It's literally what I do with my patients every day. And again, a lot of these things you're doing simultaneously and a lot of the herbs that I use are hitting two, three, four of these 10 bases.

For me, I don't love protocols because I love individualized medicine, but I would say my approach is my protocol. As long as I'm always looking at these 10 bases, the 10B, the 10 bases, and I make sure that I have all of these bases covered, it's more like a reassuring checklist.

to make sure that I didn't forget to do something with a patient. Right. And that's why I love it. And it's the same with when I talk about the three-pronged approach.

I can go back and look at, all right, I'm addressing the trigger. I'm addressing the immune system, addressing the symptoms, and then add in there the removing and replenishing.

And also, one of the things that I think you do so well on this roadmap to getting well is both monitoring the progress and then rechecking things and knowing when to wean.

Can you talk just a little bit about that too? Yeah, do you want me to talk about the whole roadmap or just like- Yeah, go ahead. Do the whole thing. All right, I'll do the fast forward first.

Quickly, yes, exactly. So in the beginning, we want to address lifestyle. So first appointment is a lot about nutrition and a lot of focusing on what to do as opposed to what not to do.

So really looking at lifestyle and instilling hope in these patients because a lot of them come in really beaten down with no hope. And then I'll do a lot of functional medicine testing.

If someone has a positive vector-borne disease test, I'm not going to retest. If their symptoms are still there and no one has really come from the approach of immune recovery, I assume they're still there.

Why would I waste more money on testing that? But I do want to look at food sensitivities, intracellular or inside of the cell, micronutrient levels, maybe viruses, gut microbiome things, hormones, thyroid function, adrenals, inflammatory markers, immune markers, et cetera.

And then really focus on getting that patient sleeping and moving in whatever way they are able to move. So meeting them where they are. Then at the next appointment, we would eliminate and replenish.

So we eliminate all of the food sensitivities that we find, we replace the deficient nutrients, we start working on the routes of elimination, healing the gut, again, sleep, water, stress, positive thinking, getting out in the sunlight and continuing their anti-inflammatory diet.

Then we go on to balancing and rebuild. So we want to rebuild the immune system, balance the immune system, and balance that inflammatory cytokine cascade.

And then once we get all of that going, and they've been on that for about four weeks, then I will put in the killers. So the proven killers of whatever it is we found that we're dealing with, viruses, bacteria, parasites, mold, fungus, et cetera, while we're continuing to implement the first three steps.

And then from then on, it's really just fine tuning and monitoring the progress. So I will monitor progress roughly every eight weeks in the first six months.

In the last six months, it might be more like every 12 to 16 weeks. But really what I'm looking for is once I get them on that full protocol, so once I've added their killers, I want to see in the first 90 days from there that they have about a 25% improvement.

So this is looking at three things. This is looking at the sheer number of symptoms. And every time I have a patient come in, I have this symptom checklist that they fill out.

So I want to see that number is moving down. Some people start out with 50 symptoms. Some people start out with 15 and everything in between. But I'm looking for the sheer number of symptoms to come down as well as I get a severity and a frequency.

So I'm looking for the severity to come down, the frequency to come down. You know, if someone's having to piggyback ibuprofen and Tylenol when they're first coming in for their pain, you know, just the fact that they don't need to take those anymore is a huge improvement, right?

Thank you. So we're monitoring progress, making sure everything's going well. And then I will treat until the patient has been symptom free for two solid months.

So no flares, no herxing, no change. And at that point, I will recheck all of the labs that were abnormal as far as like inflammation, immune function.

If I am going to stop someone's antimicrobial treatment, I will repeat the vector borne disease panels that I used

originally or that they came to me with.

And I am looking for IgM's to be gone. And I'm looking for IgGs to be down in that indeterminate range, not still like if you're using igenex pluses and if you're using other labs, like not using anything that I would consider to be, you know, showing me a chronic infection.

I need to believe, you know, I think INDs could be, okay, those could be memory IgG cells, right? So anything sky high for IgGs to me says active chronic infection.

Anything that's IgM for sure is still active infection. At least that's how my brain looks at it. Mine too. And then I will wean off the antimicrobials.

So typically I will stop the antimicrobials. I will keep them on the anti-inflammatories, the G3M and their basic nutrients that they were deficient in and I put them on.

And then I will wait four weeks. If there is no relapse or return of symptoms, then I will pull the anti-inflammatory herbs. And then I will wait another four weeks.

And so basically, I will wean them off. And then once they've been good for three months, I'll redo the micronutrient test. I'll redo the food sensitivity panel.

Because a lot of times, the support that patients needed in the beginning when they were very, very sick and inflamed, they don't need half of it anymore.

and they also will lose their food sensitivities. And so I'm able to then put them on some sort of like general health and wellness maintenance program, which 99% of the time does not include using any antimicrobial herbs.

Right. And I think that's also important. I mean, in what you said about the food sensitivities, that's really about that gut permeability, that leaky gut.

So once you've healed the gut, those are going away because you've done that. And I know that this sounds to many of our listeners, viewers, oh, this is unbelievably long, unbelievably hard, but it is a step-by-step approach to real, true healing.

And it is a marathon. But if you go into it thinking about, I'm going to come out the other side healed, or my child is, you can take one step to move down this road and get healthier.

I agree 100%. And to me, it's like I would do anything to be able to offer my child a life of normalcy. I mean, if you just look at the disease and the chronic illness in our world today, and I don't say this lightly because I know that it's hard work, but it's like, look, do you want to end up with, as an adult or as a young adult, autoimmunity?

you know, cardiometabolic disease, cancer, dementia. I mean, do you want to end up with that?

## Hope, resilience, and closing remarks

Because if not, all the things that you and I ask people to do as this foundational groundwork is what every single person in this world literally should be doing for their own health and their own body because most of these chronic diseases are self-inflicted from diet and lifestyle and all of the nonsense that we have been brainwashed to do to ourself in the name of health.

Absolutely. Mariah, you're such a wealth of information and such a great teacher, clinician, mom, all of that. So thank you. Well, I'm going to interrupt you and say I learned from the best.

So anyone who doesn't know, Nancy was my first mentor. And I mean, Seriously, she helped to shape my brain and the way that I think about things and has taught me just as much as she says I taught her.

So don't let her fool you. Yeah, well, mutual admiration society. But anyway, how can people find you in any way they want to? Sure. So I think the easiest way is just go to drhinchi.com.

So that kind of has all things me. So you can find your way to my clinic, which is Tao Vitality. You can find your way to Lime Bites, which is my educational platform and future podcast and symposium.

And then you can also find your way to Lime Core Botanicals, which is my herbal medicinal company for treating chronic complex illness. Yes. And someday when you sleep, we'll…

Anyway, any last words you want to share with the people listening? Oh, yeah. So whether, no matter what it is and what your health challenges are, don't lose hope because our bodies are resilient.

And if we can get to the root cause and we can just remove whatever that obstacle to healing is, or we can give our body what it is that it's missing.

I don't care how old you are, I just heard somebody say this the other day and I wish I could remember who it was, but it's like if you're alive you can heal.

Yeah. So as long as you're not dead, you're good. You can heal yourself. Exactly. And really that's why I'm doing this podcast, just to let all the moms out there, all the dads, all the kids and the practitioners who hopefully, if you are listening, know that there is hope.

So Mariah, thank you again for everything you do and for being with us today. Thanks for having me. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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