Introduction and Guest Background

Hi, and welcome to another episode of the healing Lyme Summit. I'm your host, Doctor Myriah Hinchey. And here with me for tonight's discussion is Doctor Richard Horowitz.

He is the medical director of the Hudson Valley Healing Arts Center, as well as founding member of the International Lyme and Associated Diseases Society.

He has published numerous articles on the treatment of Lyme and tick borne disease. He has treated over 13,000 patients for Lyme and tick borne illness over the past 30 years.

Welcome, Doctor Horowitz. Tell our listeners a little bit about how you got started treating or specializing in Lyme disease. Thank you Myriah. It's great to be here and I'm really happy to have you as my co-host, by the way.

It's been a great experience. so I basically got into Lyme disease simply because my patients needed me too. when I graduated from medical school and moved to the, upstate New York area of Hyde Park, New York, I didn't realize I was walking into the largest Lyme endemic area in the United States.

And, you know, people were coming in were bullseye rashes. You know, you learn that 28 days of antibiotics, time, it might have even been 14 days of antibiotics was the treatment.

Many would get better, but some wouldn't. And, you know, the ones who came back and were well, it made me think back to a teaching that I got in my last year of medical school when I was in Belgium.

And for those of you who don't know a little bit about my my background, I have studied with Tibetan Buddhist teachers for the last 40 plus years, and I started, training with them back in 1981 when I was in Brussels doing my medical school training.

When I was doing it in French, and when I was finishing up medical school, I went to one of my teachers, Lama and Rinpoche, and I said to him, Lama, what is the most important thing you want me to know going out into the world as a doctor?

And he said to me, Richard, the most important thing is compassion. He said, put yourself in people's shoes and do for them what you would want done for yourself.

He says, if you do this, everything will go well. Now, for anyone who has studied any of these type of teachings, you'll know that it is a pretty common teachings, probably in most religions.

really not that special. But it's interesting that when the lying patients came back in and they weren't, well, it popped into my consciousness and I went, gee, well, if I was in their position, I would want a doctor looking for answers, because at the time I sent them to the infectious disease doctor who did not have an answer, and I sent it to the largest and the rheumatologist.

Nobody had answers back in the early 1990s. So I started going to Lyme conferences and reading the medical literature. And you know, started speaking to people like Joe, Boris Cano and, Sam Danza and Ken Leader, who are, you know, the Giants whose shoulders I've stood upon.

and basically they started teaching me and I started expanding my practice, but it was really just the need of being in the middle of an epidemic, people being sick and saying, hey, I'm a doctor.

This is my job. No one else is figuring it out. I would want a doctor to figure it out. And 35 years later, 13,000 people

later. It's been a quite an interesting journey, something I would not have expected.

And you're figuring it out? We are figuring it out. In fact, this year, I think was the hallmark with the article we published in microorganisms that journal Microorganisms in September 2023.

How Lyme Specialization Began

on DApps, on combination therapy, comparing longer pulses to shorter. I think for me, that article is probably the for me, maybe the best article we have ever published online because it actually offers for some people, the closest to a cure or at least a long term remission.

If we're not getting rid of all the bacteria, we are getting rid of enough that many people using the protocol published in that article are going into long term remission.

So it's a very exciting time. It's it's taken me a long time to figure it out. I thank my patients, you know, gratefully because they allowed me to play with these protocols and figure it out, explaining the science to them.

But, yeah, we are we're in a very good position at this point, this year to do a randomized control trial on, on and, and show to the world that we do have an answer.

That's wonderful. And to our listeners, make sure that you listen to, the discussion that we had earlier on Dobson and the effectiveness of Dobson treatment for stars.

so as far as this talk goes. So let's talk. You know, I was always taught Lyme and tick borne disease is the clinical diagnosis. So let's get into that aspect of it.

And you've developed a questionnaire that has the ability to detect tick borne illness in patients about as well as any other test out there. so I'd like you to speak a little bit about the clinical diagnosis of Borrelia.

Bartonella and Bbca. and then let's get into talking about the questionnaire and how to use it. Okay. Great. So first of all, the important point you said that with clinical diagnosis is people out there listening need to know that.

Number one, these are clinical diagnosis. Right. So Lyme is a clinical diagnosis. If you have an m rash and erythema migraines rash you do not need a positive blood test.

Right. So the point being that there are certain clinical symptoms that tell a healthcare provider that you have Lyme. And what we did with this questionnaire that you're referring to.

And I, by the way, the name of the questionnaire that the shortened version, I call it the MQ or Horowitz Emesis Questionnaire. And this questionnaire was developed based on some of the questions which were initially developed by Doctor Joe Boris Garneau, who had been doing this in in Long Island and of course, has paved the way for many of us, along the way.

But what I did with his questionnaire is I decided to spore him. So, for example, questions one inch 22 on the questionnaire, are for bbca day sweats, night sweats, chills, flushing, air hunger, difficulty catching your breath.

Unexplained cough. If I have a patient fill out that questionnaire, this 38 item questionnaire, which has four sections which I'll discuss with you and I see questions one inch 22 positive.

And let's see, I see moderate or severe for sweats, day sweats and night sweats. It says to me automatically, oh, this patient may have a case of the bosses, which is a malaria like organism.

Now always an internal medicine. You always do a differential diagnosis. So so you know, I kind of have a way that I've thought about these diseases over the years where, for example, if someone has these sweats, I say to myself, all right, one of the top 8 or 10 causes of drenching sweats, and I've memorized them.

And by the way, for those of you who have it, memorize them or don't ever want to memorize them. If you go to my last book, How Can I Get Better? Pages 50 to 66 I think it is.

It describes for every symptom with Lyme on these 38 items, all the differential diagnoses. So the biggest one of course is fatigue. Right. Because there's like probably 100 different things that cause fatigue.

But for sweats you have to think of malaria. Did they go to India. Well now actually we have malaria in the United States and in Texas. Right. And in certain other parts of the US, they're now showing up with malaria, but maybe they've got hypothyroidism.

do they have a cough where they might have had this blood in the phlegm that might be indicative of tuberculosis? Or do they have really large lymph nodes and they're losing weight with drenching sweats?

That might be non-Hodgkin's lymphoma. is a woman over 50. She might have menopause. Right. maybe I have an autoimmune disorder. So the point being, you always have to do a differential diagnosis for every symptom.

But the beauty of the questionnaire is by identifying every one of these symptoms, it gives you kind of a sense of what might be going on and on this questionnaire, of these 38 items, there's specific questions that are very important.

Now Lyme being a multi systemic illness, it means that most people with Lyme when they fill this out, out of the 38 items, 30 out of 38 for the most part in most patients will be filled out when they come to my office.

So it's a multi systemic illness. The way you also can identify it as symptoms come and go with good and bad days. People will tell you some days they feel better, some they feel worse.

They don't know why. But the hallmark and this is on the questionnaire in section two as the Lyme incident score is, is your pain that you have in your body.

Joint pain, muscle pain or nerve pain. And nerve pain can be described as tingling, numbness, stabbing, burning sensations. if you have any of those symptoms that migrate migratory joint pain one day, your joint pains in your shoulder, then it's in your knee.

Another day you have muscle pain right in your thighs and now it's in your forearms. The pain is moving around your body and especially the migratory nerve pain.

There is no other disease in medicine that causes migratory nerve pain. You can get nerve pain from carpal tunnel syndrome and diabetes and hypothyroidism, and heavy metal toxins like mercury, lead, arsenic, and mold toxicity.

B12 deficiency, folic acid. There's a many reasons why people can get nerve pain, right? But with Lyme, the migratory aspect tells you it's very likely that someone has active Lyme disease.

So in this questionnaire there's 38 questions. The migratory aspect is very important when you're filling it out. And then I look at the constellation of symptoms.

So for example most of the line patients have fatigue. They have pain muscle joint nerve pain. A lot of these patients have memory concentration problems with brain fog.

They have sleep disorders where they can't fall asleep or they keep waking up in the middle of the night. Right. Very, very common in this population.

In my population, most you have bbca. They do have day sweats, night sweats, chills, air hunger. Many of them also will have chest pain, palpitations and shortness of breath.

Right. We see this with Pots postural orthostatic tachycardia syndrome which you get with chronic Lyme. And you

also get with long Covid. So we look at all of this constellation of symptoms of depression, anxiety, sleep disorders, brain fog, memory problems, pain, fatigue.

Now the problem, of course, is those symptoms overlap chronic fatigue syndrome and fibromyalgia or myalgic encephalomyelitis. So how do you differentiate right those diseases from Lyme.

And again it is the migratory aspect with symptoms coming and going with good and bad days and with women also they'll tell you around the menstrual cycle the symptoms get worse when the estrogen goes down right.

And the symptoms get better when they're finished with their cycle. They also will get better or worse with antibiotics. Right? They hurts. They get an inflammatory response when you kill off the bugs with doxy cycling or remarks Cicilline.

Or they might feel better. So antibiotics make their symptoms better or worse. So, for example, if your chronic fatigue or fibromyalgia was due to a virus like herpes virus six, or if you have long Covid, right, well, you might also have loss of sense of smell or taste or pulmonary problems from the Covid, right.

Those are not normally things we're seeing in chronic Lyme. They're not going to normally have those good and bad days with migratory pain. They may have pain.

That's part of the complex and long Covid, but it doesn't migrate right. And their brain fog can look like Lyme, as can their fatigue.

Clinical Diagnosis and the Horowitz Questionnaire

And that's why this questionnaire is so important, because we needed to validate a questionnaire to figure out before we do a gazillion tests on patients, what is actually the likelihood they have it.

So in these four sections, the Lyme incident scale, we have a CDC Healthy Day scale. How many days in a month did you have good and bad days with your physical, mental, emotional health?

And finally a Lyme score of like where we put five points. For example, if you have the constellation of fatigue, brain fog, insomnia, pain, right, we would put these kind of symptoms together.

And the way the questionnaire was validated is we looked at 1600 people from three medical practices. And this was done at the University of New Paltz with Doctor Mariella Cetera and my good friend, Doctor Phyllis Freeman.

And we validated it statistically and what we found is that there was convergent, divergent, validity and also predictive validity, which means that from a statistical standpoint, when you're looking at a questionnaire, it had all of the aspects statistically with the p values, meaning it's effective in finding out, at least giving you a sense of what is the probability of Lyme.

So the way you score the questionnaire and you can find the questionnaire, by the way, on my website dot can get better.com. Just go under the code under the questionnaire symptoms questionnaire.

You'll find it. You just download the PDF when you score it. If you have a score of 63 or higher, very high probability you have active Lyme disease. If it's between 45 and 62, it's very probable you have Lyme disease.

If it's between 25 and 4144, it's likely it's probable, right. But if it's below 25, it's not likely. You're generally going to suffer from Lyme disease.

So at least it gives the patient and it gives the physician a sense of like, okay, they scored high I should you Lyme testing because if someone's scoring low it may not make any sense to do a battery of tests.

But again when I look at this questionnaire and I look at the constellation, the minute I see severe fatigue, severe

brain fog in a 30 year old person with chest pain and palpitations and sweats, right.

And pain. And they tell me it's migratory. I already know what I'm dealing with. I don't need to get a life test back. And which everyone out there needs to know is there's only seven diseases in medicine that cause migratory pain.

And I like making a joke for my doctor friends. And unless you're at the lower end of your medical school class and graduated at the bottom, you'll generally be able to tell the difference between hepatitis, acute rheumatic fever, got a couple arthritis, right?

With a discharge Ryder syndrome from salmonella, Shigella, Yesenia I mean having ulcerative colitis or Crohn's disease or having lupus. Those are the other six diseases that cause migratory pain.

And believe me, they look nothing like chronic Lyme disease if you've ever seen these diseases. So it's actually quite an interesting question. They're focusing on the migratory aspect of the pain.

Questions 1 in 22 for the BCA. And we use the questionnaire to follow patients. So when after we do for example the Daptone protocol, I go back and look at the questionnaire and go, oh look, you had severe fatigue two months ago.

Now you're fatigue is gone and your joint pain was severe. Now it's mild and you only have it a couple of days a month. So I can kind of track all the symptoms using the questionnaire.

And really it tells the doctor, right, how to track the question, the symptoms in the patients, but also what is the likelihood and should I do a battery of tests.

Right. Looking for Lyme disease. So that's essentially some of the clinical characteristics of Lyme. But Busia just quickly is a malaria like organism.

So malaria day sweats night sweats chills flushing air hunger. Can't catch my breath. Unexplained cough now. So those of you who went to medical school and you read the textbooks on bbca, you would expect me to say anemia.

Hemolysis, where the red blood cells are bursting apart at you don't see it in my population. Interestingly enough, when patients get Lyme and they get the BCA, many of the patients never have a hemolysis.

They never get kidney failure. They never get the liver problems that you read about in the textbooks. And it's because of the interaction of the way these bugs are working together.

And finally, for Bartonella, with the three BS, because these are really the three biggest, bacteria as well as parasite that I see affecting my patients.

Bartonella kind of looks like Lyme, but it's a way more severe version of it. So with Bartonella, severe fatigue, severe headaches, severe memory problems, severe joint pain, severe neuropathy, it really does look like line.

But the difference is you can get nuance at seizure disorder. Oftentimes you'll get eye disorders like optic and right as can happen with line. But it also happens in part.

But you'll get like retinal problems with Bartonella that an ophthalmologist will be able to pick up. You will occasionally see really large lymph nodes with Bartonella.

I will tell you in clinical practice, oftentimes I actually don't see it. However, what I do normally see is the classical stretch marks, the stream of Bartonella that kind of looked like either white lines or sometimes they're purplish.

And it can be in a Christmas tree pattern or horizontal. We'll see that with also granulomas, these bumps that will show up on the extensor surfaces of the fingers, those are really kind of the things we're looking for with like severe neuropathy severe neuropsychiatric.

These are the people with schizophrenia. The people with bad bipolar the bad obsessive compulsive disorder with Lyme. Almost guaranteed these people are going to have Bartonella.

And in the study we just published in microorganism, we showed that it was the people with multiple Bartonella species and the busiest species, the worst neuropsychiatric, the worst neuropathy with pain.

With this burning, stabbing pain, sometimes it's numbness. Also the worst autonomic property with pots and the worst immune deficiency. The people who had no immuno globulins or lacked subclasses.

That was all from the Bartonella and the Lyme together. So when I look at, you know, the laboratories and I look at the symptoms and the pain in the bottom of the feet for Bartonella, very, very classic symptom.

Joe kind of described this decades ago. And he was right, very, very classic symptom. That's kind of what you're looking for, you know, in these patients with Bartonella.

But I will tell you, the overlap is is quite strong. There are some patients with Bubka. They never get sweats. About one out of 100. They're just horribly sick.

And I'll get a Bubka fish test. Fish stands for fluorescent in situ hybridization. It's an RNA test whether the B0 is in the blood, it fluoresces green.

I will be shocked that they have BCA which is active and they've got no malarial symptoms. So this is a tricky disease. You see enough patients. You'll always see kind of outliers at all end.

But that's kind of the clinical presentation that you're looking for in most of these patients. So it's a clinical presentation. and it's blatantly obvious to you. Right.

Or other medical practitioners what you know, what is going on. You already know pretty much what the diagnosis is. Say that you need to prove it to the patient, or you need to prove it to another medical professional, or you just want the proof.

What are your favorite, favorite tests and laboratories who conduct these tests when it comes to the big three BS? Yeah, it's a great question. So I try and limit the tests to specialty laboratories, obviously, because I don't want patients to pay too much out of pocket.

Although I will say if you're Medicare, I genex will cover basically all the testing that you need for free. It's great. I usually will start off if someone says I'm financially challenged and I cannot afford a lot of testing for Lyme, I will tell them minimally just do an ECG, ECG, Lyme, immuno blot from my genetics.

And the reason being, if you do a western blot from a standard lab from LabCorp or quest to buy a reference, it looks for one strain a Borrelia. Now Borrelia burgdorferi sense you strict two is the original bacteria that was described 45 years ago, right by Alan Steer.

We now know that there are over 100 different branches of the most common pathogenic species, including some of the immuno blot, because it checks for Borrelia sense.

You strict you really, amazingly, really green eye. A lot of the different organisms and I play a game called Lyme Bingo. And I suggest everybody take notes on this one if you've not played this game before, because this is how you ultimately diagnose Lyme.

Someone who comes in and says, I have all of these symptoms on the 38 item questionnaire, the HMC, I have good and bad days. The symptoms are coming and going, the joint pain, the muscle pain in the nerve pain is migrating around my body.

I've got horrible brain fog and I do an immuno blot, and I see any one of the following five numbers 23 out of

surface protein C 31 out, a surface protein A, 34 out of surface protein B 39 very specific.

And the 83 slash 93 if any one of those bands. Because this is recombinant DNA. This is not a Western blot. And you can get false positives. This is positive or it's negative.

If any one of those band shows up on an immuno blot bingo, you have been exposed to a Borrelia species. It may not be the original Borrelia burgdorferi I sent to strict you, but it's what we call Borrelia sense.

You latu. It's one of these cousins of Lyme disease that is now making people sick. Like all of the different species in the US and in Europe. So I love the immuno blot.

And I might do an Eliza locally through LabCorp quest or a C6 Elisa, which the advantage is, is that it checks three strains of Borrelia. Since you strict, you really have light and really green light.

But that being said, I have many patients with the Eliza's negative and the C6 is positive, or the C6 is positive and the Eliza's negative, or both are negative, and a Western blot or an immuno blot may be positive.

But the point being, you don't use CDC criteria with an Eliza followed by a western blot to make the diagnosis. Lyme is a clinical diagnosis, as we've talked about.

And the way you make the clinical diagnosis is use the Q questionnaire, look at migratory pain and look for those Borrelia specific bands having also, of course, ruled out other diseases because there's a lot of things.

And we'll talk about this today on the M SIDs map. There's a lot of other overlapping factors, right, that keep people sick. But I'll do an Eliza if it's negative a C6, I'll occasionally do an immunofluorescence antibody.

if I want to do direct testing, I will do pcrs. I like the fish test, fluorescent in situ hybridization for Busia and Bartonella. Those are my go to tests.

But BCA fish, Bartonella fish for my genetics go to for diagnosing the Busia Baat. But T labs also has some very good fish testing. I picked up the BCA species like, the BCA Oticon fly through T labs that I was not able to pick up in other places, but all the other tick-borne testing like Galicia and a plasma Rocky Mountain spotted fever, typhus, Q fever, tularemia, Brucella, the viruses, Epstein-Barr.

I do this through the local labs. Right. So it's covered by everyone's insurance. and direct testing. it's useful, but I will tell you, you usually need indirect and direct testing.

Direct testing is like PCR, fish or RNA testing or phage red laboratories in Belgium will do phage testing. That's direct testing. Or you can do nano trap speed testing.

and I can't do it in New York, but it picks up the ASP in the urine. Those are direct tests that you can all use to diagnose Lyme. Usually you're going to need a combination of many of these tests to prove it.

But remember, it's a clinical diagnosis, a high score in the HMC, any bans on an immuno blot. You pretty much got your diagnosis. But usually you have to figure out what are the other bacteria.

What are the other parasites like the BCA or intestinal parasites? What are the other viruses? Do they have long Covid right? Do they have Epstein-Barr reactivation or herpesvirus six.

do they have fungus Candida molt? You've got to look for all of the overlapping factors because in my world, it is never just Lyme disease that keeping these people in.

Yeah that's true. Okay. So Doctor Horowitz a letter, listeners know how they can get Ahold of you if they would like to and let us know if you have anything new coming up.

So people can get in touch with me through my medical office at medical, at HHV KGW.com. and for people who are interested in the daptone study, eventually at the end of the year, whether it's doctors or patients, research at Chess.com.

But I would ask people, please follow me regularly on Facebook, Doctor Richard Horowitz, Dr. Richard Horowitz, anything that's new in medicine regarding the M6 map or Lyme or Busia, Bartonella, I'm regularly posting, for the community out there to make sure they are up to date with all of the new things that are coming out in the literature.

and I will be working, by the way, on a third science book. I'll be starting at sometime this year. I don't want to give away the title yet. I think I know what it is, but I don't want to give away it yet.

and I will be speaking at the Southeast Regional Integrative Medical Conference in Asheville, North Carolina this summer. I was invited by Sonia Rappaport and the, the organizers.

So that's going to be great. I'll be speaking for several days. It'll be a very intimate conference. I think docs are going to learn a lot. And I'll be at Islands in Houston, in San Antonio, Texas at the end of the year.

for people also to follow the work. Wonderful. So let's talk about do you do you want to talk more about the questionnaire and the validity at all. do you want to talk about.

So the, the main, the main thing I would say about the questionnaire is all the score, a high score on this HMC questionnaire greater than 63, which is two standard deviations.

It's a really high probability. And whoever's looking at your medical charts, it tells them you've used a validated questionnaire. But regarding the testing and the questionnaire, the average Elisa followed by a Western blot, it's a coin flip.

It's about a 5,056% chance of picking it up. The questionnaire has an 87% accuracy with validity. When we looked at it from diverging convergent and predictive validity.

So the point being the questionnaire is actually more accurate than doing a two tier test with an Eliza and a Western blot. So keep in mind that I think you've got to use all of these together.

and I think it shouldn't be one or the other. And again, we'll even follow the bands on the immuno blots. Right. Or the Western blots to see how they change over time.

Let's say somebody has done with treatment and they had a 23, 31, 34, 39, 83 band. And you check them years later, those bands may still be there, but usually they'll be gone.

But let's say they didn't have a 2331, and two years later they're complaining to you. Their symptoms are coming back. They've got fatigue, they've got joint pain.

And now you see a new 2331 band. You know that the lime is reactivated because the immune system is picking up the very specific proteins on the outside of the bacteria.

So I'd say use, you know, the immuno blots and use the variety of tests we discussed in the questionnaire together. And usually you'll be able to figure out kind of where patients are, do they have the disease.

And it's a very good way of following them over time. But it is clinical. I, I look at the migratory pain. I don't follow the releases and, you know, Western blots to figure out if they're in remission.

It's the patient who tells me they're in remission, right. Their symptoms are gone or much better. I just use the immuno blots and bands to figure out do they still have a little bit in their body? Right.

I might repeat a Bartonella fish to see if they were positive. Can I still find it? Is it still active? That's where I want to

use some of these tests in these chronically ill patients.

Yeah, I love that. And I love that. You know, when you're working with a patient it's not you know, there's other than looking at, you know, maybe some inflammatory tests or a immune system evaluation test.

You know, we can't a it's cost prohibitive for most people to be able to do this testing so close together. You know, looking at antibodies with indirect tests.

But also it takes so long for these antibody levels to come back down. And like you said, that could be present years later. So what I love about your questionnaire is that you can use it as a tool to see, you know, this, this resolution of symptoms.

Right? So the decrease in overall number of symptoms and decrease in the severity of symptoms not only guides you as a practitioner that your treatment is working, but it's very reassuring.

And it almost becomes like and even though it's subjective and the patient is filling it out over time, when you're looking at their original, you know, compared to two months in compared to six months in compared to nine months.

Testing for Lyme, Babesia, and Bartonella

And it's becoming objective information to the patient that they are getting better and that this is working. And because the patients are stuck in their bodies 24 hours a day, you know, they don't realize the progress that they're making.

So I think it's an invaluable tool to be able to show the medical, provider as well as the patient that treatment is working and it's free, and there's not much else you can say that about.

It's it is free. Just download off of the site. It's absolutely free. Yes, yes, it's a great point. And that's it. Can can get better outcome. Yes. Hi.

All right. So moving on to the 16 point since evaluation or Map, can you tell us a little bit more about that and how to use it. Sure. So the the example I use for patients who come to see me in my medical practice, it's like coming to a doctor with 16 nails in your foot, telling the doctor you a foot pain, and the doctor finds one of the nails, pulls it out, tells you to come back in a month, and then says, how's your foot pain?

And it's like, obviously you're still going to have foot pain. You have 15 nails in your foot. Well, that's kind of what the map is like. So the way I designed the message map, it's not like I came up with any of this separately.

These things all existed in medicine. It's not like I made any of these points up, but what I did do by seeing 13,000 chronically ill patients, I would keep seeing like, well, what is keeping these people ill?

So the way the map works is six of these factors of the 16 are inflammatory meaning. And the way I describe it is kind of like rivers of inflammation going into an ocean of inflammation.

So the reason Lyme patients, by the way, are sick and tired and foggy and, you know, have psychiatric issues is from inflammation. And there's a lot of inflammatory molecules that are produced.

When you have Lyme a lot of biochemical pathways are activated. So the first part of these six points of this inflammatory response is what I call the three BS, which we've been discussing Borrelia, the BCA, Bartonella.

Now that's not to say there are another infections because there are do we see viral reactivation with Epstein-Barr or herpes virus six? Absolutely. Just like you do with long Covid.

Right. Do we see in some of these patients candidiasis is a Candida overgrowth in their gut where they might have

a fungal overlap. And they do dab sound and they're finished and they say I still feel tired and foggy anarchy.

But she doc, I eat carbohydrates, I get gassy and bloated. I've got a coated tongue or a woman might have some bad units and discharge and I go, oh, it sounds like you're overloaded with Candida.

Here's a course of fluconazole. And they come back in a month and they go, I feel completely fine that the last 10% was fungal. It was Candida, right?

So keeping in mind that there's four classes of infections bacteria, viruses right, fungus and parasites. And although PPC is the most common parasite, we do occasionally see intestinal parasites, right, that show up in these patients.

And even for the bacteria, many of these patients with gut issues, which is the second and third point on the message, inflammatory is microbiome issues.

You've got the wrong types of bacteria. You might have too much Prevotella species, too much Clostridium, not enough of the right type, or you've got leaky gut, you've got food sensitivities, you've got mast cell activation, a lot of inflammation meeting the wrong foods.

That also causes an inflammatory response and causes the same symptoms as line. So it causes fatigue and pain and brain fog. So the first three is the infections.

The three BS microbiome leaky gut. But then we have sleep disorders. If you are a lime patient and you don't fall asleep, inflammatory molecules like interleukin six, they don't shut off.

You will never have without a good night's sleep. You know, I don't. I sleep six hours one night and I'm fogged out the next day and tired. Right. I need eight hours of sleep.

These are Lyme patients who don't sleep four hours a night. The inflammation never shuts off. So you've got to deal with sleep disorder and Lyme causes delayed sleep phase syndrome and actually causes a circadian rhythm disorder where these people don't fall asleep, right.

Or keep waking up where they sleep for 16 hours and they never feel refreshed. The last two of the inflammation is that there are toxins, many toxins getting into people.

We'll talk mainly about heavy metals and mold, but truthfully, there's hundreds to thousands of chemicals getting into people. And then there are nutritional deficiencies, whether it's vitamins and minerals where people can detox these chemicals properly.

So if you don't have enough magnesium, the 300 enzymes in your body don't work. You don't have enough copper. There's an enzyme called superoxide dismutase.

You got a lot of inflammation. You don't have enough zinc. Also, you can get aldehydes being produced which cause brain fog. So all of these six factors out of the 16, they're like rivers of inflammation.

And they have downstream effects on the body. And what are the downstream effects or the immunity. Just like long Covid, right. You'll get an A set of positive antinuclear antibodies, rheumatoid factors, Hashimoto's antibodies with anti thyroid antibodies, anti ganglia side antibodies, anti-migrant antibodies.

It's a big autoimmune factor. But that doesn't mean you have rheumatoid arthritis or lupus or an autoimmune disorder. It means that the inflammatory response from the bacteria and everything else going on is quite an autoimmune reactions.

But usually once you treat the underlying factors, the autoimmune reactions actually will get much better. But you'll get this inflammation affecting the vagus nerve, the part of your body that controls your heart rate, your bowels,

your blood pressure, your bladder, and that causes pots.

Postural orthostatic tachycardia syndrome. You stand up, you feel like you're going to pass out or you do pass out. You're tired, you're foggy, you're anxious, you have palpitations.

Well, those are the symptoms of pots. Now, you could have gotten rid of all of the bacteria with lemon Bart and treated the bbca. But if you don't treat the pots or know you have it, you may keep giving people antibiotics or herbs ad infinitum, thinking it's still an active infection.

But it was the vagal dysfunction, right? That caused the problems or the inflammation affected their pituitary gland and their hormones. They get low adrenal function.

Men get low testosterone, the mitochondria, the parts of the body that make energy. There's nothing to protect them from all this inflammation. So you get mitochondrial dysfunction, you get nerve pain and pain disorders and liver dysfunction, and a lot of neuropsychiatric dysfunction from all of the inflammation.

So what's important here to realize is when someone comes in and we call it chronic Lyme disease. Right. It is not chronic Lyme disease. It is really from me limited meaning every person is going to be completely different.

Some people will have four nails in their foot, some people will have 12 nails in the foot. And your job as the medical detective is to figure out what are the nails and to treat it.

But that's kind of an overview and why the message model is so important and why when we do this randomized trial, I'm going to probably screen for at least three months before adoption, because these are factors that interfere with the success of the antibiotic protocols.

So we need to show to the community that it's not just Lyme and unfortunate in medicine. And if you were taught the same thing, Myriah, but we were taught one cause for one disease, right?

It's like Pasteur's litter box postulate from the 1800s. Well, in the 21st century, folks, it's not. It's multifactorial. It's no longer one cause for one disease.

Right? It's usually in my patients Lyme, but Busia, Bartonella, Potts with vagal dysfunction, most have mold. Many have heavy metals. Most have nutritional deficiencies.

Many have mitochondrial. They have pretty much all of this. And in the articles we published, but 70% of the time most of the patients have most of these factors.

So it's a really important. And I discussed these in my first book, Why Can't I Get Better? Solving the Mystery of Lyme and Chronic Disease, which was a New York Times bestseller.

And in how can I Get Better? Right? An action plan for treating resistant Lyme and chronic disease, both from Saint Martin's Press. So this 16 point message model and treatments, it's all in these books.

And the last book, How Can I Get Better has some of the dap. So although I will tell you, when I published the last book in 2017, I was just discussing DApps on at that point I started in in 2016.

Boy, have we come a long way. if I was to write the third book, which I'm going to write, it will be beyond line, but will be about how this message model affects a lot of these different chronic diseases.

Because Lyme is showing up under Alzheimer's biofilms, we're seeing Lyme in some cases in autism spectrum disorders, in people with ADHD. I mean, all of these chronic diseases that we're having 87% of the health care costs in 70% of the deaths in this country are chronic illness, and we don't have a model.

I'm proposing that the 16.6 model is a good starting point, because it doesn't matter what you're labeling your

chronic fatiguing musculoskeletal neuropsychiatric illness.

Usually the absence model is going to kind of put you on track to figure out what's going on. Yeah, I agree, I think that model is fantastic. And you know, from someone who was trained pretty much in the functional medicine arena, like straight through and out of medical school.

yeah, this is more how my mind works. So I often, you know, will tell my patients Lyme, you know, if, if, if it's an infection, whether it's Lyme or some other tick borne disease or any other infection that comes and causes massive inflammation and kind of breaks the immune system, and then all hell breaks loose, right?

And it's it's your genetic weaknesses and your snips, but it's also previous injuries.

The 16-Point MSIDS Map

It's just it's what makes you you and what those weaknesses are. That's where these infections are going to go to. Right. And so if you have gut issues right.

Or your microbiome is is not balanced and you have, you know, issues in the gut and that's your weakness, that's going to be one of the places where Lyme is going to wreak the most havoc.

And then if you have Bartonella, forget it, you know, but it's like it's different in every person because we all have different weaknesses. And I always say like the infection goes there like a magnet.

And so you can focus on killing the infection until the cows come home. But like if you're not restoring the terrain and restoring proper function to the body and helping to, you know, inhibit the inflammatory cytokine cascade, balance the immune system, heal the patient, they're never going to end up better.

No. And that's the point. You know, you learned that in your med school. I had to figure this out, by the way, myself, because even though my seven year medical program in Belgium was great, I wouldn't say terrain, the notion of terrain, even though the European system is generally much more open and broad.

That notion of terrain, I don't think, was stressed in exactly the same way. And and you brought up an important point about like the immune system, inflammation, just for example, one of these points on the message model, immune dysfunction, we talked earlier that and Bartonella can affect the immune system.

Right. And the studies I published and Nicole Baumgartner showed this in mouth in the mice model, when Lyme goes into the lymph nodes it gets rid of the B-cells, the cells in your body that make antibodies.

So it gets rid of the IgG antibodies, the ones that are the most effective in clearing the infection. And it leaves the IGA. So when you're aligned patient and you go for a Lyme test and you bring to your doctor, you're CDC positive IgG am not IgG, I am immuno bladder western blot.

And your doctor says to you, oh that's a false positive right. that's only in early Lyme. It's not true. That actually is the most common manifestation in late Lyme is a CDC positive IgG blot because Lyme knocked out the IgG antibodies.

And if you go check people's immunoglobulins in subclasses, you'll see with bad active Lyme and Bartonella it's been knocked out. They're immune deficient.

So how can you throw herbs or antibiotics at people. And you've never checked their immunity to see how they fight. It's like with Covid if you don't check natural killer cells, the type of cells in the body with the CD8 that go after the viruses and you don't know how they're functioning, how do you know how someone's going to get over Covid, right?

Or you don't know their antioxidant pathways and their glutathione? And, and long Covid is really becoming a

problem because it does look like chronic Lyme, right?

Brain fog, fatigue, pain disorder, anemia, sleep disorders, neuropsychiatric. It's pretty much got the same symptoms. But with Lyme it's good and bad days.

Symptoms come and go. Antibiotics make it better or worse. Women have the hormonal flares, right? You've got the bands. Of course, on the immuno blot.

But let's face it, there's a lot of people out there. It's not going to be just long Covid. It will be long Covid and chronic Lyme and Bart. Or it might be Bartonella without Lyme.

With long Covid. We're dealing with an infectious soup these days, and doctors really need to know how to make the diagnosis and differentiate this because we're seeing this in our practice.

Fortunately for me, by the way, we published the first article in April 2020 after the Covid pandemic just started on glutathione deficiency in Covid.

We actually published the first article has been cited over 250 times. And what we discovered is, is that and I knew this from the BCA, the patients, they came in with, the BCA who was short of breath, and I gave them a two gram shot of glutathione and they said, oh my God, my shortness of breath is gone.

When patients were coming in with Covid and describing the shortness of breath, I said, gee, I wonder if that's going to work like it does for the busy and Lyme patients.

And sure enough, it did. So we published two case studies. Now it turns out all the people in the ICUs, they've now shown that these are the people with the lowest glutathione levels, because there's 140 times more glutathione in your lung tissue than any place else in the body.

So if you've used up glutathione, which is your primary antioxidant, to detoxify the body from chemicals, right. If you don't have enough and you get Covid, that's where you can end up with problems with lungs and of course, inflammation in multiple body tissues.

So, you know, knowing the biochemical pathways and having done this for long, it turns out I was able to provide at least a protocol. We've not had one Covid patient die in the last four years and I've only had two hospitalizations.

One was on a ventilator. She was in her 70s and both were boosted and immunized. Right. And it just was you know, one was immune deficient and and the other also had problems.

But other than that, no hospitalizations, no deaths and no long Covid just by using the protocol for Covid, that again is on our website. Go to can get better.com under the Covid tab and look at treatments.

And by the way, those treatments are the treatments for her time of reactions. It's the same treatments we used for Lyme. We blocked a pathway called NF Kappa B with an Acetylcysteine alpha lipoic glutathione.

We stimulate an anti-inflammatory pathway called Nrf2 with tumeric, curcumin, broccoli seed extract, sulforaphane, glucosinolates, resveratrol, and green tea extract.

We block an inflammatory pathway called an LRP three inflammasome with low dose melatonin. We blocked microglial activation in the brain with low dose naltrexone.

All of the tricks we've learned for Lyme. I know you've done this too. They ended up working for Covid and just yesterday they published that earlier study showed Paxlovid was helping stop long Covid.

Now they're not so sure that we don't actually have an answer for it. So, you know, I'm thinking maybe blocking these inflammatory pathways early on has helped my Lyme patients, because I'm not seeing a lot of long Covid in

the chronic Lyme population.

I was just going to say the exact same thing most of my patients. So same, I don't think in my practice we even had well, we did have one person who was severely immunodeficient and on immunosuppressant drugs who ended up, in the ICU with Covid, but other than that, I mean, we have not had really any severe cases of Covid.

And, you know, my sort of theory behind that is that most of our patients who are being treated for chronic tick borne disease are on a myriad of herbal medicines that shut down interleukin six, interleukin eight, interleukin one, beta tumor necrosis factor alpha, and kappa beta, you know, all of these that, that mAPK is like all of these cytokines, inflammatory cytokines that are that are causing a lot of the issues.

And a lot of these IRBs actually protect, like the Ace2 receptor and linkages and actually stop that whole, the whole ignition, like right from the beginning with the cytokines. So, you know, on top of that, with people eating the best that they can eat and trying to live a healthier lifestyle and, you know, all of the things that we do to really address, like, all of the things that you are talking about.

And I just think that the healthier you are when you're exposed to something like this and, you know, if you have all of those little blockages in place, you're going to do so much better.

but what do you think the relationship is? Do you think it's the inflammatory cytokines, cascades? And like the alteration of the immune system in that immune imbalance that the spike protein, whether it's from a vaccine or whether it's from having wild Covid, do you think that that is what can cause a reemergence of a dormant, tick borne infection?

Or do you have a different theory? You know, I mean, these, of course, are really great questions. There are unanswered questions for the most part. when I look at the literature on long Covid and I look at the, since Map and Lyme, what's interesting is 7 to 8 of the factors of the message map we've been discussing today have all been discovered for long.

Covid. Why infections and inflammation causes immune dysfunction. So whether the inflammation is Borelli bird or fry Lyme causing inflammation and immune dysfunction, or it's a virus Covid 19 causing inflammation, immune dysfunction, they've now shown in long Covid, the same autoimmune reactions, the same changes in the microbiome of the gut.

They've shown mast cell activation in a lot of these patients. They've shown active virus in the colon of some of these patients, lowering down serotonin.

They found parts this autonomic because the vagus nerve was affected by this right. They've seen viral reactivation with Epstein-Barr. We also see it with herpes virus six and other viruses.

So when we're looking at like the overlaps of the message model of chronic Lyme and long Covid infections, inflammation and immune dysfunction applies in both models.

So I think the reason we're not seeing these complications is glutathione. And what they've shown with the Covid virus is it needs to lower Glu to fine levels to replicate.

So this and I did know that, of course, when I published the articles, we published two articles in April and in May of 2020 on this, one on the need for randomized trial on this protocol.

But ultimately, now that we know that the emergence factors are showing up, I think it would be fascinating. And we designed the trial. It just the FDA wanted me to use a placebo was too difficult to actually look at glutathione on early on, the same way we're doing it for our live patients who get Covid.

And and by the way, the other interesting fact apart from good, if I'm stopping viral replication, is that DApps on which a lot of these patients have been on, it's shown that in some of the studies where they used apps on, like the

earlier virus, like the alpha, when it first came out, there was all of this Ards with white out of the lung where people have dying of lung disease.

That's own stopped Ards in a study that they published in around 40 patients where they did give them DAP, so they didn't give them the some DAP, some completely shut down, the inflammatory cascade and the reason, by the way, I love DAP seven and I, we've talked about in earlier talks, but the quality of the drug of why like initially I said, can I use this with Covid, the reason you can it's anti-inflammatory.

It hits an enzyme called Milo peroxidase. So it lowers down these inflammatory cascades that people also get with Covid. It has great penetration into the brain.

I don't have to use I. V. anymore. It's anti-malarial besar shows up in a lot of these patients. It's used for autoimmune diseases. We know that line patients get these autoimmune reactions, and it's a persistent drug, meaning it hits these persistent bacteria.

It checked off all the boxes that you needed for a drug. So an early on I would think, gee, I can't leave them on it. But now actually when patients get Covid, I'm leaving them on the DApps on protocol.

I'm actually not changing it. I'm just using like 2000mg of glutathione on a couple of times a day with higher dose MTC. I'm just blocking all the inflammatory pathways.

And again, for those of you listening, if you just go under can get better.com under the Covid tab. The entire protocol is there, including, by the way, all the biochemical pathways and studies that I wanted to do.

So do you think that your patients had a less severe outcome with Covid because a majority of your patients are on dapt some. I'm not sure if it was just from the DApps on.

I'm fairly sure the NAC glutathione played a role in the reason. I think it was also important with the NAC, which is the precursor of glutathione, is that these people that got micro clots right, we were seeing all these pulmonary embolism, micro clots and the people with with Covid, I haven't seen one of them.

And when you look at the properties of Acetylcysteine, which we use regularly in the lime population, for cases with glutathione, it blocks von Willebrand factor.

So I take any C on a regular basis. I've had Covid twice. I mean, I've been vaccinated and I've had Covid twice, and I've used Paxlovid. I'm fine as is my wife at this point.

But the point being, I think the NHC included iron on top of blocking these other inflammatory pathways. and a la Petri with melatonin. And they're on vitamin D and they're on zinc, and they're taking three six beta glucan immune sticks to raise up their natural killer cells to fight.

I mean, I designed the protocol. In fact, before I really knew all the biochem pathways of Covid just to block inflammation and kind of support immunity and support a healthy inflammatory response, kind of what we do for line.

It's worked. So I think adaption may be part of it, but I actually think it actually is the NHC glutathione component helping to stop the viral replication and stopping the micro clots.

And that, of course, would have to be proven on a, you know, in a randomized trial.

COVID, Inflammation, and Overlapping Chronic Illness

So most of your patients are on NAC and glutathione as okay. Oh, absolutely. They're in fact the core protocol. They're all on NEC alpha lipoic acid, glutathione to black NF kappa B minimally on a tumeric compound like curt duplex uncle plex which is sulforaphane glucose late broccoli seed for NRF two activation if they have a sleep

problem or on a touch of melatonin.

Most are on low dose naltrexone. So they're on all of these supplements. Because they help with hexes, they help to lower the inflammation. Right. Because the line patients get tremendous inflammatory responses.

And interestingly enough, in long Covid the H1 H2 blockers right, are helping some of these patients, like when they get muscle activation. So a lot of what we've learned about Lyme actually is overlapping and helping a lot of these patients with Covid.

Yeah it's amazing. I don't know if I would have known how to help anyone with Covid had I not specialized in treating and with specialized in treating tick borne disease.

So before we wrap up, could you just elaborate a little bit more about mycotoxins, heavy metals, other toxins? You know, when it comes to treating tick borne disease and you think that, since map.

Yeah, it's very important to look for these toxins again in the body. And again, as we talked about earlier, there's hundreds of thousands of chemicals getting to everyone.

And these are hormone disruptors that cause insulin resistance, that cause cancer. I mean, they're horrible. which is part of the reason I take any scene all day long, actually.

I take it at least twice a day, but mold and heavy metals, the reason you've got to look for them is when we did the studies early on, and I presented this at Lyme conferences literally 20 years ago when we started looking for heavy metals like mercury, lead, arsenic, cadmium, aluminum.

What we discovered is not only that patients had these not just in their blood, but they had them in their tissues on a six hour urine DMZ challenge. But in certain of these patients, after we treated them with antibiotics and they said, gee, I, I still had fatigue and brain fog and pain.

And then we pulled out the heavy metals. They went, doc, I feel completely well. It was like, what? It's like, oh, the heavy metals were responsible and interesting.

There are studies published on, bugs like chlamydia, pneumonia that when you add heavy metals like mercury and put it in a joint tissue, the inflammation goes wild.

And if you don't put heavy metals in there, you don't get the same inflammatory response. So I think the metals are increasing the inflammation we're seeing from these biofilm persistent forms.

So you've got to look for the metals and especially the mold. Because now that I'm doing daptone in, pretty much everyone coming into the office, we are finding mold.

In the last study we published, it was 84% of our patients. And earlier on I used to joke with Neil Nathan, who's a good friend of mine and mold expert, and I'd say, Neil, I'm finding the mold in a lot of these patients, but it just doesn't seem to be playing as a larger role as the line for busy apart and the absence factors.

And of course, in the past year now I've had a couple of cases the last few months exactly. One is in Europe and one is in Florida. Lyme, the Busia Bart did the DAP zone, did the nine week to zone.

Pulses would get better, but kept relapsing and more than I would have expected. And neither of them admitted to having mold exposure. And I said to them, listen, you're in Florida, which of course there's a risk of it.

And this other patient was in a part of Europe where there's a lot of water. And I said, just do me a favor and send off the real time labs mycotoxins test.

Let's see what you got. They were positive on all five mold toxins. And what was really fascinating to me is I'm no

longer doing any Lyme but PCR Bartonella treatment.

But by simply opening up the detox pathways and giving them AC, alpha lipoic acid, glutathione, phosphor, little choline, three grams of hospital choline twice a day with binders if they have trichomes, thickens, which is one of the mole toxins we're using something like up the fiber lean glucose man in an hour away from food to pull the trickle thickens.

But otherwise we're using GI detox to product from bio botanicals with, charcoal clay, bentonite clay. We sometimes use Chlorella. We use that two hours away.

But by using GI detox, using up the fiber, lean phosphor, little choline, glutathione, a little bit of and butyrate 500mg twice a day. These patients that said to me, gee, I was getting better with the tickborne and I'm now really ill all of a sudden are miraculously well, and I mean, I've been doing this for a long time.

This shocked me. The one in Europe, he had done seven. He had six with six pulses for the Bart. He was active and was better, but something was wrong.

And after he started detoxing them all, he got back to me and said, I am 99% 100% better. I cannot believe the only thing that was not getting better was libido.

Toxins, Mold, and Detox Support

We didn't really talk about this much, but Lyme kind of knocks the libido out, right? And most people who have this and the one in Florida, I started detoxing her and she actually she couldn't even tolerate one capsule.

She got sick as a dog. We gave her the Byron White Detox, too. It's another form of charcoal clay, in a very small amount. And once we figured out the amount to pull the toxins through the detox pathways, when we found the right amount, she went, she emailed me and went, doc, that is it.

I feel the best I have felt in years. So even though I used to joke with Neal about, oh come on, mold, we're all being exposed. What's the big deal? I have to tell you, the more I do this, yeah, it's a big deal.

And especially because the Leo toxins that are showing up as one of the mole toxins are immunosuppressive. So if Lyme and Bartonella are suppressing your immune system and, and a plasma can suppress your immune system and Clio toxins because you don't want to had a lot of immunosuppressive factors in your body when you're trying to get over these tick borne infections.

So we need to remove the mole toxins both from the point of view of your immune system's response, but also because some of these patients the fatigue, the brain fog, the pain, the neuropathy, it is related to mold and it's related to heavy metals.

So really important points. And it's personalized as we talked about earlier, you don't actually know who is going to get better from this right. People can test by the way and test positive.

And it doesn't mean it's a major. Now I've had patients where they have 16 minutes. Factors all show up and it was the adrenal. It was the phase three adrenal dysfunction.

You put them on a little bit of adrenal support, hydrocortisone, whatever, and they'll go I feel great. And they have all of the other 15 factors that have not even been addressed.

So this personalized, you know, precision medicine model, even when you test positive for all these things, it doesn't even tell you the role of each of these.

You've got to kind of go in there for the patients and find out for yourself. Yeah. Like I say, it's one big giant ball of wax. And a lot of times you have to deal with the whole thing at once.

So any piece of advice, if you just had one thing that you could put out there to our listeners, what would it be? Before we wrap up? So for those of you who are listening, who have chronic Lyme disease and associated co-infections, the Daptone protocol that I have been developing during the last eight years, it takes a lot for me to be speaking to you directly and telling you with confidence that if I had chronic Lyme, this is what I would be doing with my doctor.

We do doctor trainings every year to train the doctors. In this I would just tell you it is published in the medical literature, the entire protocol, and if your doctor needs help, your doctor can contact me.

I do this all the time, but please do not lose hope.

Final Advice and Hope for Patients

There is hope and the Daptone protocol and other persistent drug regimens, occasionally even disulfiram, which we haven't talked about today, but we'll talk about in future episodes from Ken Lena's work.

These persistent drug regimens are working, and the misfits model. Once you figure out what are the inflammatory factors, the rivers of inflammation going into the ocean.

Do you have pots? Do you have mitochondrial? Once you figure out all of these 16 factors, you will get your health back. I mean, I would not be here doing this, Myriah.

And I will tell you this, that these talks are a lot of work. The only reason we're doing them is for you is because we care about you. We care about your health.

We want you to be better. This is an epidemic worldwide at this point, and we have solutions for you that are being discussed during these doctor talks.

So I hope you will stay tuned and listen to the episodes. we do have solutions for you, but please don't lose hope. there's a lot of discoveries that have happened in these past couple of years, and I'm really excited to share them with the line community.

Thank you so much. Thank you for all of that information. And thank you to all of you at home for listening. We will see you at the next episode. Take care.