Podcast Introduction and Guest Overview

If you just had Lyme, no active Babesia, no active Bartonella, and you finished it off with a four-day high-dose Dapsone pulse, 400 milligrams for four days, it looks like, at least retrospectively, the vast majority of people would go into remission.

The ones that didn't go into remission, there was usually active Babesia. Those people required a six-day pulse of high-dose Dapsone, at least four times, like every two months, a two-week pulse.

And again, these people had to not have long COVID. They couldn't have active mold. Those were the things that were primarily interfering with their getting better, assuming the other MSIDS variables had been addressed.

Hi, and welcome to the Lime Bites podcast, where we shine a light on the misunderstood science of Lyme and other vector borne diseases, as well as the truths that many still miss.

I'm Dr. Mariah Hinchey, naturopathic physician and fellow of the Medical Academy of Pediatric Special Needs. I specialize in treating chronic Lyme disease, as well as other complex inflammatory conditions.

In this podcast, we break down what's working and what's not. We share the facts that most people miss, we challenge outdated thinking, and we give both patients and practitioners the tools to heal smarter.

So let's get into it and change the way we heal Lyme. Hi, and welcome to another episode. I'm your host, Dr. Mariah Hinchy, and today we're going to talk about multiple inflammatory triggers, polymicrobial infections, biofilm and persister drug therapy in chronic Lyme disease, as well as the new frontier in chronic disease management.

Here to navigate with us through all of this is my co-host, Dr. Richard Horowitz. Dr. Horowitz is a board certified internist and the medical director of the Hudson Valley Healing Arts Center.

which is an integrative medical center specializing in the treatment of Lyme and other tick-borne diseases. He has treated over 13,000 Lyme and tick-borne disease patients in the last 30 years and is one of the founding members and past president-elect of the International Lyme and Associated Diseases Society.

Additionally, he's the past president of the International Lyme and Associated Diseases Educational Foundation. Dr. Hurwitz previously served as the member of the HHS Tick-Borne Disease Working Group and the New York State Department of Health Tick-Borne Disease Working Group.

For dedicating his life to helping those stricken with this devastating illness, he has been awarded the Humanitarian of the Year Award by the Turn the Corner Foundation and other awards from Project Lime.

He is also the author of two bestselling books on Lyme disease and chronic illness, Why Can't I Get Better and How Can I Get Better? He recently released his first science fiction climate change novel Starseed Revolution, The Awakening.

He will be releasing his third science book on comprehensive answers for chronic disease late in 2025 or early 2026. So be on the lookout for that. And his top accomplishments, because there are many, include the creation of the first validated Lyme symptom questionnaire for pre-test probability and assisting the diagnosis of Lyme disease.

We call it the HMQ, and we will be talking about it in a few minutes. Secondly, he developed the first effective short-term oral generic protocol for the treatment of chronic Lyme and Bartonella, known as Dapsone combination therapy.

Thirdly, he developed the first clinically proven multifactorial model to assist in the diagnosis and treatment of chronic Lyme and associated diseases called the MSIDS.

And we will also be talking about that. And he was the first doctor to diagnose Babesia in the lower Hudson Valley over 25 years ago. And lastly, he published the first article in the world literature on the use of glutathione for the treatment of COVID-19.

So welcome, Dr. Hurwitz. Thanks for joining us or me us today.

HMQ Screening Questionnaire and Lyme Diagnosis

It seems like I've done a lot after all of these years that you can't even recognize it. Hey, I shortened it too. Thank you for being here. Anything you'd like to tell our audience before we jump into the interview?

No, I mean, I think the main thing for this interview today, because we really have so many excellent speakers for this summit, is really just giving people an overview of what I have been finding is keeping people ill with Lyme disease.

So as you said, we'll talk a little bit about the screening questionnaire, HMQ. I want to go through some of the basics of the MSIDS model because Dapsone combination therapy is turning out to really be highly effective for the vast majority of people.

But the things that are interfering is if you have active Babesia, if you have active Bartonella, if you have mold, if you have long COVID, apart from other MSIDS factors, it is interfering.

So I want to give people kind of a lay of the land to say, hey, you're still going to get some help from DAPS home. But if you didn't get the full help, let me show you where to look, right?

Because that's what we're finding. But there's really a lot of hope for people these days. I mean, the scientific literature has supported biofilm persister protocols over 10 years ago.

Thank God for Johns Hopkins researchers and Eva Schoppe from the University of New Haven, Kim Lewis's lab, Stanford. I mean, I wouldn't be doing what I'm doing if it wasn't for their great work.

So yes, let's go over it a bit. But bottom line? We have hope. I mean, you're seeing it in your clinical practice. I'm seeing it. People are getting better.

So we'll discuss a little bit today some of the functional medicine approaches we found that have been so effective in patients. Wonderful. So let's start by talking about the HMQ screening questionnaire.

So I know that you recommend using that in conjunction with testing, but let's start off by talking about really what it is and how successful it is in predicting whether or not someone should go to the next step of testing.

It's important to have a pre-screening questionnaire because we're in the middle of a Lyme epidemic. It was about three or four years ago, BMG Global Health talked about 14.5% of the global population having been exposed to Lyme, Borrelia burgdorferi.

That's one in seven people on the planet. The CDC would give us figures that it's almost a half a million, 476,000, but as you know, Earlier this year, or actually we're in 2025, last year, they talked about Medicare rates being seven times higher than the screening numbers they were having, which if that were true, this puts us over 3 million people a year, which honestly is not that surprising that 1% of the US population is getting bit by ticks and getting Lyme every year.

I mean, not really that surprising for you and I considering what we're seeing. You know, not everyone's going to go run to the doctor and get a Lyme test.

So you really want to have a sense as what is really the probability I do have Lyme. So we approached this years ago with State University of New Pulse researchers, Dr.

Meliora Satera and my good friend, Phyllis Freeman, who has helped me to publish a lot of the work we've done. And we looked at a questionnaire. We took it from Dr.

Borscano's initial work with these 38 questions. But what Dr. B had not done is he didn't validate the questionnaire statistically. So we started giving it scoring.

I started doing like zero, one, two, three, as far as frequency or severity. And then we started adding other sections, healthy day scores from the CDC, likelihood you have Lyme based, did you have an EM rash?

Have you seen tick bites? And the most important is, do you have migratory pain? And you know, the thing we learned in medical school is that the most important thing you could ever do with patients to get a diagnosis is not send out blood tests, but take a proper clinical history.

It turns out that migratory joint pain, migratory muscle pain, and especially migratory nerve pain, tingling, numbness, burning, stabbing sensations that move around your body, that is the hallmark of Lyme in both the acute and chronic phases.

So when we did this questionnaire, we validated it in three medical practices, 1,600 people. We also had a group that were healthy patients who participated.

And we managed to validate it so that if your score was over 63, were two standard deviations above the mean, very high likely you have chronic Lyme, especially, again, if you've got symptoms that are coming and going with good and bad days.

You've got this migratory joint pain, muscle pain, or nerve pain moving around your body. Women will usually notice right before, during, or after the menstrual cycle, the symptoms will get worse because hormonal changes do affect the pathology of Borrelia.

And finally, when you do the Lyme testing, you know, it's the game I play with patients. You may have heard me talk about this. I call it Lyme Bingo, that, you know, if you get any one of these five bands on an immunoblot, and thank God the FDA approved Igenexx's immunoblot, even for home use, 23-ospci, 31-ASPE, 34-ASPE, 39, and the 83 slash 93. So if you score high in the questionnaire and you've got any one of those Borrelia specific bands, and also you go to a local lab and you check for Ehrlichia, Anaplasma, Rickettsia, like Rocky Mountain spotted fever, acute fever, tularemia, right?

If you're checking for these other tick-borne infections, soft tick relapsing fever, Borrelia miyamotoi, hard tick relapsing. If you get any one of these positive, you've kind of confirmed, of course, that you've had a tick bite.

So it's very useful because we also follow the same questions when we're treating people. We'll get a score when they come in. Let's say their score is 70 or 80. And then we treat them with Dapsone combination therapy.

And then we'll watch the scores go down over time. And kind of exciting for me, we just submitted just a couple of weeks ago, an R34 planning grant with the NIH to try and get money.

Mount Sinai is on board. I'll be speaking to the University of Arizona and Andrew Wiles Clinic about this, but we're trying to get a couple of partners on board.

But we're looking for NIH funds at this point to plan out a randomized multi-center placebo-controlled Dapsone trial, so that's the gold standard of medicine.

Everyone at that point will say, okay, what you've been seeing actually is true, and we're hoping that will come through by the end of 2025, and that will get the Dapsone study done by, at least started sometime by the end of

2026. The wheels are turning a little more slowly than I would like, but we had to apply for the NIH.

Granson, boy, I'll tell you, it's a lot of work. And thank God for Eva Garland Consulting in the Carolinas. They helped me with it, and they were just tremendous.

But yeah, so that's the questionnaire, the lime bands you're looking for. And hopefully, we will have a randomized trial proving all of this at some point in the near future.

That's great. And to make it clear to our listeners, so we're talking about using this, um, using this questionnaire as a tool, not only to predetermine if you're likely to have one of these tick-borne diseases, but also it can be used to monitor progress of treatment.

And it can also be used in this clinical diagnosis, because what you're saying, and I want to make it clear to the listeners is that it's not this in conjunction with getting a positive on a test.

If you're seeing any of these five specific bands, that's showing that your immune system is actually making antibodies to the proteins that are specific to, for example, if we're talking about Borrelia.

And so instead of relying on a positive or negative, which none of us ever recommended anyways, this is kind of additional proof or ammunition that helps to build that clinical diagnosis that is really the appropriate way to diagnose any of these infections.

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So join us at Pompano Beach or virtually from anywhere. Register now at LymeBytes.com. That's L-Y-M-E-B-Y-T-E-S dot com. And there's only seven different diseases in medicine that cause migratory pain.

And it's a bad joke, but I tell doctors, unless they graduated at the bottom of their medical school class, you should be able to tell the difference between, for example, something like inflammatory bowel disease with Crohn's or ulcerative colitis, which can cause some temporary migratory pain, organococcal arthritis, or having strep with acute rheumatic fever.

Reiter syndrome. Systemic lupus is probably the most difficult one because a lot of the itises of inflammation do overlap. And you can see temporary effects also with migratory pain.

But again, you can look for the autoimmune markers of lupus in that particular case. So there's not that many diseases. Hepatitis is also one of them.

You check the AST, ALT, you see what's going on. So when you realize there's only seven diseases in medicine

that cause migratory pain, and Lyme is one of them, that automatically tells you once you've, you know, you don't have diarrhea and your liver functions aren't high and you haven't had, you know, strep and rheumatic fever or writer syndrome, you don't have lupus, there's really nothing else left.

And so, you know, a lot of the Lyme groups, I mean, God bless them, they're trying to find more sensitive markers and blood tests. The LymeSeq looks like it may be getting approval later on from the Arizona group with Tammy Crawford and Holly Ahern.

But, you know, as a clinician for you and I, we've been able to diagnose Lyme for years using the tools that are out there. So it's not like we don't have any tools right now to do it.

Yes, we should improve the tools for early Lyme. Absolutely no question. But we do have tools like the HMQ and looking at migratory pain, looking at the bands on immunoblobs, which have really been quite useful for the way we've done this in the last couple of decades.

Yeah, absolutely. Thank you for developing that. Okay, so moving on, tell us about what advancements and treatments have been made over the past couple years, specifically addressing biofilms, persister cells, you know, there's really tough to treat cases of Borrelia and Bartonella.

Years ago, when I published the first study with Dr. Martin Atkinson Barr on flagell, and we didn't know at the time it was hitting the cystic, round-body, cell wall deficient forms of Lyme.

God, this goes back like 25 years. We were finding, we thought that was the reason why Lyme would persist. Putting aside the political controversies, does it exist?

Doesn't it exist? Yes, it exists, and it does persist. Not even a question. There's hundreds of literature supporting it. That's more medical politics.

That's not medical science. But putting that aside, the reason we thought as Lyme providers, we thought it was mostly these cystic forms, otherwise called cell wall deficient forms, S-forms, L-forms.

It turned out that, yes, there was some truth to that. But the main reason wasn't the cell wall forms where penicillins and cephalosporns were hitting it.

or cystic forms using Plaquenil, grapefruit seed extract, flagell, tenitazole, or intracellular forms. Zithromax, the tetracyclines, doxy, minnow, quinolones, they go intracellular.

That was part of the answer, but not the full. The most important answer turned up about 10 years ago. John Hopkins researchers like Dr. Ying Zhang had reported that Borrelia burgdorferi is a biofilm slash persistra bacteria.

Same thing with Bartonella. Now, when they called it a persister bacteria, it wasn't from our perspective that we didn't know it persisted. It was that, oh, you meant it persisted like tuberculosis, like mycobacterium tuberculosis or leprosy, which is these particular forms of the bacteria that go completely dormant and they can be under biofilms.

So part of the reason you have seronegativity and the antibodies are negative is these bugs are hiding under biofilms. The antibodies can't see them. And if you don't open up the biofilms where these bugs are hiding in these dormant phases, you're not going to get the antibiotics to go where they're supposed to go to kill the bugs.

But the problem is, even if you open the biofilms and you use a cell wall drug for the cell wall forms of Lyme or use Plaquenil Grapefruit Seed for the cystic or Zithromax, Rifampin, Intracellular, you're still not going to get these persistent forms.

This requires things like mycobacterium drugs. So when Hopkins researchers basically published this, I looked at the literature and I said, gee, you know, I was looking for an excuse when I was at Mount Sinai years ago doing my internal medicine training.

I treated a lot of TB there because it was during the early stages of the HIV epidemic. And we were seeing patients come in with tuberculosis in the lungs, MAI, mycobacterium avium intracellulare.

And one of my main teachers actually was an infectious disease doctor. So I got really used to using INH, rifampin, paracetamide, all the TB drugs. And I was looking for an excuse all these years to use them.

And then Hopkins comes out and says, it's a persister bacteria. And I went, OK, great. So I went to the literature. And I looked at the mycobacterium drugs.

And when I came across Dapsone, because I knew that rifampin and Dapsone killed leprosy, it took a year. If you take rifampin and Dapsone at 100-milligram dose, it would eliminate leprosy from the body.

So I said, all right, let's look at Dapsone. When I looked at the qualities of the drug, great penetration into the central nervous system, to the point now I never have to use IV drugs.

Ever i mean the only time in the last few years i've had to use iberosephin with someone with an early em rash with bells palsy that was not responding to high dose doxycycline and it and it did resolve but great penetration into the cns.

It hits these persistra forms of the bacteria. It's used in autoimmune diseases like besetz. We see a lot of autoimmunity. It has anti-malarial properties.

So it has some effect on babesia. And it's anti-inflammatory. It stops something called myeloperoxidase. So it kind of like checked off all the boxes you would want in a drug.

So, whereas, you know, most researchers have to go through thousands of drugs in the FDA drug library to find something that would work. I knew from a clinical perspective, as a persistent bacteria, this looked like it was going to work.

So what we did back in 2016, we published the first study on Dapzone as a novel treatment for Lyme. And at the time, I was only using doses of between 25 and 100 milligrams, sometimes alone, sometimes with rifampin, sometimes rifampin, doxyendapzone.

We still found that it had a great effect on eight major Lyme symptoms. Just headaches was the only one we didn't have statistical significance. But that's kind of how we discovered it.

And then over the last nine years, we now have, at this point, this 10 articles published on Dapsone combination therapy. Nine of them are by ourselves by Dr.

Phyllis Freeman and myself and John Fallon in the last couple, and one by Tufts University, where they showed that in the animal model, Monica Ember showed this, rifampin and Dapsone kills Borrelia in the mouse model.

So we have a culture study where Dapsone alone lowers the biofilm persistra forms. If you add another drug like Doxy, lowers it further. You add a third drug like Rifampin to Doxy and Dapsone, lowers the biofilms further.

And if you add a fourth drug like Doxy, Rifampin, Zythro to Dapsone, it works even better. Now, I did things completely backwards. I first did the clinical studies and then I went, I wonder if this actually works against the biofilm forms.

And lo and behold, it did. So we've got culture studies proving it, animal studies proving it, retrospective studies about almost 400 patients. And now we're applying for a randomized multicenter placebo trial.

So that's kind of how we came up with it. But it took me years to figure out the dosing of Dapsone to figure out what dose was needed for Lyme. And it turned out One month at 200 milligrams twice a day, if you just had Lyme, no active Babesia, no active Bartonella, and you finished it off with a four-day high-dose Dapsone pulse, 400

milligrams for four days, it looks like, at least retrospectively, the vast majority of people would go into remission.

The ones that didn't go into remission, there was usually active Babesia. They did have Bartonella. Those people required a six-day pulse of Hidostapsone at least four times, like every two months, a two-week pulse.

And again, these people had to not have long COVID. They couldn't have active mold. Those were the things that were primarily interfering what they're getting better, assuming the other variables had been addressed.

So extremely effective. You know, last year when you and I were co-hosts, I did adapt zone documentary. with 18 people and this year people are going to be very excited to see another Dapzone documentary where we have nine people, including a doctor who's been regularly using Dapzone explaining his success.

So I'm really hopeful for the Lyme community. My wife at this point is six years in remission. And, you know, it's really it's a wonderful thing because so many people are still suffering.

They're wondering, do we have answers? And we do. And but Dapsone does have side effects. So maybe we should discuss just a little bit kind of how to work around that.

Absolutely. And so before we get into that, I just have a question. Do you have kind of like a percent success rate? So like you mentioned for patients that didn't also have the Bezier or Bartonella after that first month of treatment, is there a percent success rate that you have analyzed?

So in the studies that we did previously, when we looked at double dose Dapsone, 100 milligrams twice a day, roughly about 50% of the people would go into long-term remission for a year.

So that was 50% success rate just on a first eight, eight and a half week protocol. What it turned out over time though, I mean, we're seeing much better success rates, but over time, and in fact, I published in the last couple of years, successes like those people that did fail double dose Dapsone, why did they fail?

Oh, we had to treat the Babesia with tefenicin. We'll talk about this in a second. We had to get rid of the mole. It was mostly the Bartonella. I mean, Bartonella, I think you're seeing it also, Bartonella is showing up.

And not just Bartonella hensile cat scratch, but all these different forms of Bartonella, Bartonella vinconii, Bartonella zibithae, Baxilliformis. I mean, there's 18 plus different pathogenic strains, and it's showing up in the vast majority of people.

It is way more difficult to treat than even the Lyme. But ultimately, we did fine. And most of these patients, once we kept at it, and we said, all right, you finished the Dapsone.

Let's say you cleared your body of mold. And by the way, we're now finding also with mold, we have to keep checking people's sinuses from mold spores and biofilms because we're finding in some of these people when we've detoxed the mold, we're finding that it's reactivating not just from the environment.

It's kind of like you are the moldy house. The moldy house is not right affecting you. But once we do all of those things and address it, I mean, I'm giving you an average estimate, but I would say the success rate is probably at least 80 to 90% long-term success, and it may even be higher.

Dapsone Success Rates and Treatment Barriers

But the patients right now that I'm struggling with that are still not better, and the only ones, by the way, left that I'm treating here, they still have active mold and they've not cleared it.

They still need pulses for Bartonella. The Babesia is still a problem. Or they have other MSIDS variables. And long COVID, by the way, is also now becoming problematic because I'm trying Maraviroc and Torvastatin for these patients.

You and I can get into this a little bit later. I don't know. I mean, I'm not seeing huge results yet. I'm still in the middle of evaluating it. It's not like I've got hundreds of people on it.

And I know you have had some success with natokinase and using other things there. But that seems to be kind of the nail in the foot theory, like when the patient goes into the doctor with 16 nails in the foot saying, I have pain, and they only find one nail, say, come back in a month, I still have pain.

The long COVID piece is definitely something that I'm seeing interfere with the success. And I hope over time we'll figure out better solutions, but this is kind of an evolving field for all of us.

Yeah, absolutely. And I think, um, no matter what your approach to treatment of the vector borne diseases is if, if long COVID is there like that, that definitely throws a monkey wrench in whichever approach you're trying to use and it needs to be addressed.

All right. So tell us some of the things that, um, doctors who are going to be using DAP zone should be doing to kind of ward off or prevent side effects of DAP zone therapy before we talk about what to do when things go sideways.

So the first thing is you have to be G six PD positive glucose, six phosphate dehydrogenase. It's an enzyme in the body. I've only had two people in 13,000 plus that have been negative.

So it's very likely you are going to be G six PD positive, but if you're not. the risk of hemolytic anemia getting more anemic from Dapsone or having higher elevations in methemoglobin where you don't carry oxygen in the blood, those are gonna be the major problems.

But that being said, most people would G6 be positive. Women, I like them to not be anemic, like you should try and rule out iron deficiency and B12 deficiency or anything causing anemia because one of the major side effects of Dapsone is a reversible anemia.

And on the average, you're going to drop about four grams of hemoglobin by the time you get to double dose, that's going into quad. I've seen five to six gram drops, but they always come back to normal.

So the thing that doctors and patients need to get used to is the higher your level of hemoglobin, like I have a gentleman I'm treating now, he's got a hemoglobin of 16. I mean, someone like that, I literally, I'm not exaggerating, I could close my eyes and throw a dart at the dartboard, never even get a blood test for the next nine weeks and the guy would be fine.

Because when you start that high, even if you drop to a hemoglobin of 12 or 11 or 10, you're going to barely feel it. And as long as you stay on high dose Leucovorin, 100 milligrams twice a day, and Zaquilexar from Zymogen, which is L-methylfolate, we use 120 milligrams a day.

We're reversing the anemia generally within, it takes four to eight weeks, but it's usually back to normal by eight weeks. So anemia is one of the biggest factors you're gonna see.

And with the side effects, I call it do no harm, H for herxes. So you've got to make sure, and it's part of the protocol, People take a lot of glutathione, NAC, alpha lipoic acid.

Why? Because those three supplements block an inflammatory pathway called NF-kappa B. It's one of the major inflammatory pathways that causes inflammation in the body.

Those supplements will help to block it. And you can take high dose glutathione when you're having HERXs. And it does help the vast majority of people unless their detox pathways have some issues.

So the HERXs are an issue. You may have to use lymphatic drainage. You may have to use more glutathione. We stimulate the nRF2 pathway with things like curcumin, broccoli seed extract, resveratrol, green tea.

We block NLRP3 inflammasomes in most people with low-dose naltrexone and low-dose melatonin, things like fish oils for prostaglandins. So if you read the protocol, that's been published, all of these supplements are there, including probiotics.

We're using four different probiotics to protect the gut. We literally have not seen a case of C. diff diarrhea in years because we're using something like 500 billion bacteria, all established good bacteria twice a day in these patients with prebiotics.

So, you know, you have to make sure you don't get loose stools, but it seems to be working. The real other side effect of Dapsone is called methemoglobinemia.

It's where you don't carry oxygen well in the blood, and you'll get some blue hands or blue lips. So the way we reverse it is methylene blue. Now, the problem with methylene blue, for people listening, you cannot use pulse oximetry at home if you're using Dapsone to say, my oxygen levels are going down because methylene blue stops your pulse oximetry from working properly.

The only way you're going to know your methemoglobin level is to go to the lab. That being said, we developed a protocol after the last eight to nine years and the top dose of methylene blue we use, we slowly increase it from 50 twice a day to 300 twice a day over about four to five weeks.

If you do that and you stay on a low histamine diet, because if you take histamine foods with methylene blue, your blood pressure can go up. You can't be on any psychiatric drugs like SSRIs, SNRIs, tricyclics.

You can get what's called serotonin syndrome, high fever, stiffness all over your body, irritability. Those are the potential side effects of methylene blue, and the problem is you will get a little bluish from methylene blue.

Now, methylene blue is a really interesting drug because they're using it low dose for mitochondrial dysfunction. They're using it for Alzheimer's disease.

I mean, it's a very interesting drug. But if you go up slowly, we find methemoglobin levels by the time you get to quaddapsone, it averages about 5% to 6% in about two-thirds of the people.

So you might be a little uncomfortable with some shortness of breath and a little fatigue and headaches. But nothing terrible and and the highest lately I've seen was about 18% somebody living in Colorado at 7000 feet at low oxygen tension.

And I'll tell you, they didn't even have any shortness of breath. They were so used to being at that altitude. They tolerated it. So do no harm. Herx's anemia rashes are is the rashes.

People that are sulfur-sensitive from Bactrim, sulfamethoxazole trimethylamine, you've got to be careful.

Preventing and Managing Dapsone Side Effects

But I find that even people that can take Bactrim, we'll give them an H1H2 blocker like Zyrtec, cetirizine with some famotidine pepsid. We block H1H2 receptors.

They can take Dapsone. I haven't seen anybody lately that has not been able to tolerate the drug unless they had some severe sulfur sensitivity like Stevens-Johnson syndrome where you're peeling your skin.

And I haven't even ever seen a case of that in my whole clinical career. So that being said, yes, there are side effects. but not treating Lyme disease properly and leaving this bug in your body causing inflammation.

I mean, it's been associated with Alzheimer's disease causing amyloid plaques in the brain. We see people getting joint replacements after having it for decades where the orthopedic surgeon goes in there and says, my God, what's going on in your body?

There's so much inflammation. You do not want this bacteria in your body. And the only other persister drug that's out there is disulphuram. And we have had some successes with disulphuram.

You can use that for people that are G6PD negative. And I have used it with some success. But it takes a long time to use the drug. It's a 14-day half-life.

The Herxes are terrible. You've got to watch for neuropsychiatric problems, increased neuropathy. But those are really the only two drugs that are out there right now for persisters.

So the only other approach I would say to people looking for answers is Kim Lewis's group looked at pulsing antibiotics years ago for persisters. And that's kind of what we do for Bartonella.

Bartonella is also a biofilm persister bacteria. So once we've used the nine-week Dapsone, it's just two weeks of antibiotics every two months, and it's only six days of Dapsone.

So once you've gotten through the initial Dapsone protocol, there's really hardly any Dapsone you're taking. And there are people that will do the two-week pulses without Dapsone and even still get some success.

So we would need like a multi-sender randomized trial looking at all these variables to see the best way of doing it. It seems like it is working for the vast majority of people who are taking it.

That's great. So for our listeners, I would like to make this point clear, but I want you to correct me if I'm wrong. So I have had a handful of patients who have not been able to make it through Dapsone, but I will tell you that a majority of them were not given instruction or they chose not to hear it.

You know, I understand how patients sometimes don't hear what we say to them, but in all instances, the patients were not taking leukovorin. They were not taking methylfolate.

They were not doing anything to inhibit the NL kappa beta. They were not inhibiting NLRP3. Like they weren't doing any of these things. So I think it's just important to put out there that this isn't just about taking Dapsone in combination with other antibiotics or Dapsone with methylene blue.

It is very important to take either leukovorin and or methylfolate. Like for sure, that's not an optional. That's not an after you start having symptoms.

This is something that you need to take so that your body can tolerate this treatment. Are you suffering from Lyme disease or another complex chronic illness and aren't sure who to trust when it comes to herbal supplements?

Hi, I'm Dr. Mariah Hinchey, founder of Lyme Core Botanicals. As a naturopathic physician specializing in complex chronic infection-driven illnesses like Lyme disease, I needed herbal medicine I could truly trust.

That's why I formulated Lyme Core Botanicals. where our herbal tinctures are handcrafted in small batches right here in Connecticut. We use the whole herb, never isolates, to preserve the full spectrum of medicinal compounds.

Every single step from sourcing to extraction is done with precision to ensure maximum purity, potency, and consistency. These are the same herbal formulas I used to heal myself and have used for years to help my patients and family members heal too.

And now I'm making them available to practitioners and patients everywhere. Lyme Core Botanicals, herbal medicine you can trust from a doctor who lives this work.

Learn more at Lyme Core Botanicals. That's L-Y-M-E-C-O-R-E dot com. Absolutely not a question. And in fact, the entire protocol for those listening, because I, you know, I put it out there so that everyone has access to this protocol, patients and doctors.

The paper we published in microorganisms, the journal Microorganisms September twenty twenty three has the entire depth zone protocol with. What probiotics do you take?

Exactly the names of the probiotics I'm using. What biofilm agents? Oh, you're taking cinnamon clove oregano oil from doctrine-inspired formulations. You're taking biocidin, you're taking stevia, but from nutrimetics, right?

You're taking compounded peppermint oil from every little bit of the protocol. Exactly the way I do it is in that paper. So it is available to everyone.

There's really no reason, but yes, you do not wanna do this protocol. without understanding the side effects and following the blood test properly. But if you do that, you should see a great success rate.

I mean, that's essentially why we're going for an NIH randomized trial. It took me nine years to tweak this protocol to figure out how to reduce the side effects and get to a point that I knew the success rates.

I would not be applying for an NIH multicenter grant if I didn't already know the results. But you're absolutely correct, Mariah. People have to follow the instructions carefully.

And so my advice would be if you're a doctor, if it's not someone at Dr. Horowitz's clinic in Hudson Valley that is doing, you know, that is prescribing that you find and download these instructions.

And if your doctor has not walked you through them, you walk yourself through them and you also go back to your doctor with those instructions and make sure that you're following them so that you do it and you do it right.

And I do have, for those who need it, I do have a consultation model. I don't put it out there, but I'm sure we're going to be having how many patients will be watching this.

But I do have a consultation model that I will get on the phone or a Zoom call with patients and doctors and run through the protocols and hold their hands.

So for people, for example, that don't feel comfortable doing it, hey, doc, I've never done it. I don't feel comfortable with it. I have a consultation model that they can contact my office medical at HVHAC.com.

It stands for Hudson Valley Healing Arts Center. And my office can get back to you and explain to you how the consultation model works. And we have had doctors.

who've accessed the model. In fact, one of the doctors, Dr. Moss, who I interviewed for our Dapsone documentary this year, he accessed the model. He's been having great results with it in his patients.

He's got some great stories of kids with Bartonella whose psychiatric symptoms got tremendously better, but he felt a lot more comfortable. He took the training course that I have, which again, you can access this on our website, cangetbetter.com.

Just look under there, you'll find it. I would suggest for doctors wanting to learn about this, maybe take the training course. It's about 20 hours of training, but it's well worth it.

It's not expensive to do it. And then you have access to me and if you need the consultation model. But again, it's out there and it's free. You do not need to do this.

I put it out there so the entire world has access to this protocol because we are in the middle of a worldwide epidemic. We sure are. And to make it clear, these consultations are for medical professionals.

This is not for patients to be calling and trying to do this. I just want to make that clear. Correct. You have to have your doctor on the line, because it's not me who's going to be prescribing.

It will be your doctor who will be following my advice diagnostically, therapeutically. They will be following my advice on how to, you know, what are the doses of Vapsone and Rifampin.

I will give them the entire protocol and they can contact me as it goes on. In fact, I've had a couple of doctors who've been sick themselves who have accessed the model and they got through it and they're both doing much, much better.

Recently, I just had two of them. So, yes, it's a doctor. It's not patients who do this alone. You have to have a doctor willing to prescribe the Dapzone.

This includes in Europe, because I just recently had a patient in Bulgaria contact me who's looking to have a Bulgarian doctor do this for her. Yep. Yeah.

I just want to make it clear before you have literally thousands of patients calling the office. And then my office will not be happy about that. Definitely not.

Okay. So let's start talking about the, so talk to me about the overlapping variables and kind of just how they apply to chronic illness in general. So, you know, the problem with most chronic diseases, and it doesn't matter whether you're calling it chronic fatigue syndrome, ME, fibromyalgia, long COVID, every chronic disease we are dealing with is due to inflammation, every one of them.

MSIDS Model and Overlapping Chronic Illness Factors

And in fact, in this new book that I'll be doing with Simon and Schuster, I'm pretty sure it will be out early 2026, We are showing in this that when you address the broad range of chronic diseases, this is gonna be a very broad ranging book, way beyond Lyme.

There will be a section on Lyme, but there'll be a section on the ABCs of chronic medicine of ADD, ADHD, autism spectrum disorder, Alzheimer's disease, the B's for Borrelia, C for cancer, cardiovascular.

We're going through these chronic illnesses and showing you how the MSIDS model works. Now, how does it actually work? If you have inflammation, and inflammation is the reason why you have fatigue, headaches, pain, memory issues, sleep disorders, irritability, psychiatric issues, it's always inflammation.

Though you have to figure out where the inflammation is coming from. The first six factors on the MSIDS model is number one, infections, So we're talking bacterial infections like Lyme Bartonella, viral infections, reactivation of Epstein-Barr herpesvirus 6, could be long COVID, parasites like Babesia, defungal infections, whether it's aspergillosis in your lungs or Candida in your GI tract, but four different types of infections that can drive inflammation.

So after infections comes environmental toxins, heavy metals and mold toxins. They will cause very similar symptoms to what you're seeing with chronic Lyme disease.

Then two of the next are with the GI. You've got the microbiome issues of the gut where they've shown that if you have too much Prevotella species or too much Clostridium species, not enough acrimoncia, bifidobacterium, you're going to get inflammation in your body.

And that's the case, whether it's autism, whether it's Alzheimer's, whether it's chronic Lyme disease. The fourth GI is leaky gut with food sensitivities and mast cell activation.

The fifth inflammatory factor is having vitamin mineral deficiencies, which we're finding in a large percentage of our patients, because when you're detoxing all these environmental chemicals, you're using it up.

And the sixth is insomnia, because Lyme patients generally have a really rough time falling asleep, and they keep waking up, and that will keep driving an inflammatory response.

So I call these first six factors on the MSIDS model, the six rivers of inflammation that go into an ocean of inflammation. So then you've got these downstream effects of what is the inflammation doing?

Well, it affects your mitochondria, the part of your cells that make energy, because there's nothing surrounding the mitochondria like your DNA of histones to protect it.

There's nothing surrounding the mitochondria protect from all this oxidative free radical stress. And that's why we use a lot of these supplements and why after Dapsone, we do a one month mitochondrial regeneration.

But the inflammation goes into your brain and affects the hypothalamic pituitary axis. We get most of our patients have low adrenal function. A lot of men have low testosterone.

Some women go into early menopause. So it affects your hormones. It affects the autonomic nervous system. We get POTS dysautonomia, where you'll get fatigue, dizziness standing up, feeling like I'm going to pass out, I do pass out, anxiety, cognitive issues, palpitations.

Now, those symptoms from POTS can also happen from long COVID. They'll happen from other causes, but they look like Lyme and they smell like Lyme, but you're not treating those with antibiotics.

That's your autonomic nervous system that has to be regulated through vagal regulation and autonomic nervous system dysfunction kind of limbic retraining.

And then you've got things like autoimmunity, immune dysfunction. Lyman-Bartonella can both wipe out your immune system, low immunoglobulus in subclasses, or T cell exhaustion from long COVID, or autoimmune reactions that are happening, with then liver dysfunction, neuropsychiatric symptoms, and finally, deconditioning.

So those are the 10 downstream effects. And we find in the vast majority of our people, Most people have at least eight of these 16 factors that are making the mill.

But interesting, you might have, you know, 12 of them could show up, but it might primarily be you treat the Lyme and it goes, oh my God, I feel great.

I've had patients where I just treated their adrenals. And they went, that was it. Even though I have Lyme and I have mold, it was like the low adrenals was the main key.

So you don't know when it's positive what is the major factor. You can try and guess based on the symptoms. But that's really the MSIDS model. And the reason it has to be approached is it's not enough to just do Dapsone combination therapy and biofilm agents, because all of these other factors driving inflammation will still cause fatigue and headaches and joint pain and memory problems.

You've got to get to all the underlying sources of inflammation. So it's kind of a paradigm shift of how we're looking at chronic illness. And ultimately, assuming later on in life my research capabilities get greater after this Dapsone trial, the next one, there's a DARPA grant from the NIH where it's a much bigger grant where you look at all these chronic diseases like chronic fatigue, ME, fibro, long COVID, chronic Lyme, that all have the same symptoms.

Yet the etiology may be different or maybe it's all absence. It could be that in all these different diseases, right, we've got different infections, but still mold and toxins are overlapping.

Right now, medicine doesn't have a common denominator model to address all these chronic diseases. That's actually this new book. that I will be doing with Simon and Schuster.

So we do have answers, but when you're working with your doctor, just get the checklist. You can find it. You don't even have to buy my books. Why can I get better?

How can I get better? I published this in healthcare in 2018, where you look at the MSIDS model. So again, it's

available, but you wanna do the MSIDS model using persister biofilm.

Otherwise, you're not gonna get the full effect of really trying to get you across your healing journey and get better. Yeah. And I think, you know, a lot of this comes back to, I think the, the common denominator is the infection or inflammation, sorry, inflammation driven immune dysfunction.

I think that's really what is at the heart of any chronic disease, you know, that we have even, even right down to cardiovascular disease, not to go down a rabbit hole, but you know it's kind of like obviously the antimicrobials that we use are important but you know I think everyone needs to realize if they already don't that no antibiotic is going to take any infection to zero right it shrinks the load in the end it's a functioning immune system that has to come in and stop that infection from replicating and growing back.

And so I love your model because it addresses all of the things in the human body that need to be addressed to restore that proper immune function in the end so that the person gets better and stays better and doesn't become that statistic of once you have Lyme, you always have Lyme, you know?

No, your point is great. And the thing about it is I've had patients with immune deficiency who've tried pulling the mold, who've tried treating the Lyme with Dapsone.

They absolutely did not get the full effects of this protocol because you're right, the immune system has to be able to handle the bugs. I mean, with Dapsone, you'll lower the load of the bugs.

And, you know, when I get lucky, right, you'll do an eight and a half to nine week protocol. And again, if you don't have BART, you don't have Babesia, you don't have mold.

You may go into long-term remission. You got a 50-50 shot. It's going to happen. But if your immune system is affected, you're not going to get the full effect.

So you're right. I mean, it's an excellent point. You have to go through the full MSIDS model to make sure you're looking at all of these different factors.

Yeah. Okay, and so the last, we touched on it a little bit, but talk to us because COVID is still a very real thing. It's in our environment. It's never going away.

Everybody has to deal with it. How does COVID and the spike protein impact a patient that has tick-borne disease and create a lot of roadblocks to actually getting better?

Long COVID, Spike Protein, and Final Takeaways

And of course, this feeds into the MSIDS model, but I think it's important for patients consumers, et cetera, to end medical professionals to really understand that it does impact the treatment.

Yeah. So what we're finding, so there's a test from Radiance Diagnostics. This is the lab that Bruce Patterson had founded. And if you go on the website, www.covidlonghaulers.com, you will see that there's two different panels you can do.

I order the 14 cytokine panel. And what's really interesting about this panel is it'll tell you whether your Lyme is still active because he checks things like TNF alpha, which comes from NFB activation.

He will check IL-6. Again, you're getting this with NFB activation. But things like IL-4, or SDC40, or interferon gamma, or CCL5 rantes, these are markers of long COVID.

And what Bruce Patterson and others are finding is that these spike proteins, the monocytes in the body, some of these spike proteins are hiding in places in the body.

It might be in your vessels, in your vasculature, or in other places. And your monocytes are activated trying to get rid of these spike proteins. And therefore, the inflammatory response is not shutting off.

And we have definitely seen it interfere in the success of Dapsone combination therapy. But the problem I'm having is the protocol that Bruce Patterson has developed, which is essentially three months of Maraviroc.

It's an HIV drug, but it's not a classic antiviral. It's just helping the monocytes to kind of lower inflammation and help with the spike proteins. It's 300 milligrams twice a day for three months.

Very well tolerated. We don't really see problems with it. You're going to do it with a statin most of the time, like a Torvastatin, 10 milligrams, or Pravastatin.

That is for some of the, also the inflammation we're seeing in the platelets, the SDC40L. That's indicating platelet activation. That's what these statins are working on.

I've done this for patients, and it's not a large number, maybe 12, 15 patients. I have not yet seen massive results. So I got back to Bruce, and I said, Bruce, what am I doing here?

He said, well, initially, he said, it could be two months. I tried two months, nothing. I saw no results. So now we're doing three. And he said, well, if by the end of the second month, going into the third, you don't see a result, add some culturecine.

Culturecine is an old anti-inflammatory, 0.6 milligrams a day. They used to use it for gout. They use it for other things. We've started to add it. Now, I'm not sure that the reason I'm still not seeing the effect, and they haven't gotten through the finish line yet, is some people, and you brought it up earlier, it may just be that we do need to use some natokinase to kind of open things up and find where the spike proteins are hiding so the immune system can get rid of it.

There's a lot of unknowns at this point that we're dealing with. But I'm not yet seeing the full results. But the problem I'm facing is some of these patients that are taking the protocol, still have Bartonella fishes that are positive.

They've not yet finished the mold detox. So the problem I'm facing is when you've still got nails in your foot saying I have pain and they're all driving inflammation, it could be that once I get rid of the Barton, I do enough pulsing.

and I've gotten rid of the mold completely, and we've again checked the sinuses, then maybe the Mavroc and Pravastatin protocol will work better. But this is kind of a question mark for me, because I'm really wanting to get to the end of this for most patients, as you do and everyone does.

So they don't have to suffer for the rest of their life. And I must admit, it is becoming a problem in some of the patients. Fortunately, most of the people will still get better.

Holding the mold, addressing babesia and BART. And for babesia, during our summit, you're going to hear from Jeff Dow from 60 Degrees Pharmaceutical. And Tom Moorcroft and I had a great talk on defenicin for babesia.

You should listen to those. Not even a doubt, we are seeing better results using these protocols for babesia than some of the other protocols we used to use with mepronazithromax, clindamycin and quinine, lots of malarone and herbs.

Not to say they don't help, but we're having a rough time getting rid of the parasite. This newer protocol with the phenoquine is helping. So there's definitely hope for people.

But this is kind of an ongoing question mark of what exactly is the best protocol. And I'm still waiting to see the scientific results from it. Yeah. Well, I think we're all excited to see the results from your study.

And for the listeners, too, it's like different protocols work. differently for different people, right? This is not a one size fits all. And again, I think the MSEDS kind of like highlights how every single person is different and needs a different focus and therapy in addition to whatever you're using as your antimicrobials to really heal the body, which is what the summit is all about.

So Thank you so much for joining us. Any final thoughts you'd like to leave with our listeners? No, I mean, I think really the major thing is, um, and I always usually end with this because I have very little filter between my brain and my mouth is there is hope.

There is hope and more hope now than ever before. I mean, we only really kind of discovered the answer for Bartonella only a little over a year and a half ago when we started pulsing more of these two-week Dapsone protocols for patients.

I mean, otherwise, Bartonella was interfering. And by the way, There's still more work to do on this, right? There are still people that I've seen still Barton Ella fish positive sometimes in people after doing six pulses, but they're still loaded with mold.

And there's other reasons why they may not be responding. But ultimately, there is hope. We are having much greater success where people do not have to stay on antibiotics for the rest of their lives.

where people don't have to be doing detox protocols for the rest of their existence or herbs for, you know, forever. And the herbs clearly are useful.

I mean, way before, you know, you're getting good results with herbal protocols, and I used to myself also. But we've got to address these biofilms and persisters and the MSIDS model with doing this.

It's really provided me with tools that I didn't have years ago. So I'm really encouraged for people to let them know that hope does exist. Do not give up.

Please speak to your doctor about learning these protocols, because ultimately, it's the most effective and shortest term protocol I know, how to get people's health back.

Wonderful. Well, thank you again for your time. Thank you for being here for our summit and to our listeners at home. Thank you so much for joining us.

I hope that this is helpful on your journey to healing from Lyme and co-infections and we'll see you at another episode. Bye bye. If this episode gave you an answer, brought you new insight, or made you think differently, subscribe to the Lime Bites podcast and share with someone who's ready to take control of their healing journey.

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