

## [#68: Dr. Jill Interviews Dr. Darin Ingels, ND on Successful Treatment of Lyme Disease](#)

### **Dr. Jill** 00:12

Hey everyone, good afternoon! I am here with Dr. Ingels, one of my favorite people, especially on the topic of Lyme disease. We're going to hear some great information from him and hear what else he has going on for you in online courses and his book. So you'll hear all about that today.

### **Dr. Jill** 00:30

Before we jump in, just a bit of background: If you want to find me, blogs, and everything free on the website, it's just JillCarnahan.com. If you want to find any products that I carry, they're at DrJillHealth.com. And then, of course, you probably heard me say every time here that I've got a free YouTube channel now with over 60 hours of interviews with experts like Dr. Ingels. I just enjoy it. It's like my time to have coffee and pick their brains. I always learn as much as you guys learn, which is like the secret, right? We get to learn from each other.

### **Dr. Jill** 00:59

So I'm excited to be here with Dr. Ingels. I want to formally introduce him and then we'll jump right in. Dr. Ingels is a licensed naturopathic doctor. He's an author—[and has] one of the best books out there, I think, on Lyme disease—international speaker and leading authority on Lyme. He is a former Lyme patient who overcame his three-year battle with Lyme disease after having failed conventional treatment—like many of us, we kind of come to that wall and say, "What else is possible?"—and becoming progressively debilitated. He found that proper diet, lifestyle management, and natural therapies worked with his body to heal instead of against it. He then applied what he had learned about diet and lifestyle to manage his own patients and found that they recovered faster with less side effects. He's now treated thousands of patients with chronic illnesses using his novel approach, and many have gone on to live healthy, symptom-free lives.

### **Dr. Jill** 01:48

If there's one thing we want to bring here today, there's hope. So many people get the diagnosis of Lyme, go on a Facebook support group, and hear these horror stories. [Yet], there's a lot of healing possible. We'll dive into that.

**Dr. Jill** 02:02

Also, he's been featured on WebMD, MindBodyGreen, BeWell, ThriveGlobal, Motherly, Voyage LA, and many other sites. And his book, if you haven't seen it—again, we'll link up to this and give you resources there—*The Lyme Solution: A 5-Part Plan to Fight the Inflammatory Auto-immune Response and Beat Lyme Disease*. Welcome, Dr. Ingels. I'm so glad to have you here.

**Dr. Darin Ingels** 02:25

Oh, it's my absolute pleasure for being here. So thank you so much for sending me the invitation. I appreciate it.

**Dr. Jill** 02:31

You are welcome. Well, first of all, let's start with your journey. We heard just a little blip there. But tell us how you got into this and what brought about your interest in Lyme disease?

**Dr. Darin Ingels** 02:42

Well, like a lot of us, we have our own personal afflictions with some of these conditions, and it forces our hand to deal with it. I moved to Connecticut after I finished my residency in Seattle. A year and a half after I moved to Connecticut, I got Lyme disease. Of course, for those who don't know, Lyme disease is named after Lyme, Connecticut. I was about 20 minutes down the road from Lyme, Connecticut. I had classic Lyme symptoms: Bull's-eye, rash, headache, fever, joint pain—kind of the whole gamut. And ironically, I got bit two weeks before I opened my own practice. So the timing was horrible. But I found it right away, and I started on antibiotics. And really, within four days of treatment, I felt quite well.

**Dr. Darin Ingels** 03:26

But looking back on it, it was really the perfect storm. I did the standard 21 days of doxycycline—that's what you were supposed to do—and I completed it. But eight months into opening my own business, I started to get symptoms again. But, to be honest, I wasn't eating very well. I certainly wasn't sleeping well. I was working six to seven days a week, long hours because I did everything in my practice, and it caught up with me. So I figured: "Okay, well, I had Lyme before; I'll just go back and do the same thing." I did the same thing and it did nothing. Then I changed antibiotics for another month, and it did nothing. Then I started working with a

local Lyme doctor, and we started the litany of different combinations of antibiotics. [After] nine months of antibiotics, I got worse.

**Dr. Darin Ingels 04:09**

So I was at a point where I was like: "Look, whatever I'm doing is not helping. I need a different path." I knew of a doctor in New York City who's a traditionally trained Chinese medical practitioner and acupuncturist. I had had patients over the years who had seen him. I went and saw him in New York City. He started me on a series of Chinese herbs and also kind of gave me a slap in the face, like: Hey, dummy, you need to take care of yourself. Of course, everything we do in functional medicine, like helping our patients, we don't do for ourselves. So it's like: Practice what you preach. And I did that. I started herbs. And really, within a month, I felt 80% to 85% better. So that was my light bulb, like: "Okay, there is a path here. It's getting better." And clearly, just trying to kill the bug wasn't doing it.

**Dr. Darin Ingels 04:50**

So once I started really committing to that, it still took me another two-plus years to feel like I really had my strength, my stamina, and my mojo back. But I eventually did get to that point. And I realized, through my own journey, that I just started applying everything I was doing to myself to my patients. I found that if we don't just focus on killing the bug and do all these other things like diet, lifestyle, and sleep, people get better faster. And now, having treated 7,000 Lyme patients, including myself, I realized that there is a path, and as you mentioned, there is hope for people who sometimes get these diagnoses.

**Dr. Darin Ingels 05:27**

Not just Lyme disease but [with] a lot of these chronic illnesses, like you said, you go on a Facebook page, and it's horribly depressing. You kind of feel like nobody gets better. And I realized too that if you're one of those people who really does get better, you don't spend your time on Facebook. You're out living your life. So you get this very skewed view of what happens in the world because the people who are doing really well get out of it because they don't want to get sucked back into that. So yes, that was the first part of my journey.

**Dr. Darin Ingels 05:55**

I was symptom-free for about 10 years. Then, fast forward: I started developing other neurological symptoms and was diagnosed with multiple sclerosis. So I'm still dealing with that. But again, I'm very functional. I do very well. I'm friends with Dr. Terry Wahls and learned a lot from her about how you manage through diet and lifestyle, which is really naturopathic medicine 101. So again, when you get into the muck of things, you learn how to deal with it. But it certainly taught me resilience and taught me how to use everything I know as a doctor to heal myself and help others.

**Dr. Jill** 06:29

Wow. Oh, gosh, I have so many threads I want to go down with you on what you've just shared. First of all, I love that you framed this. And for people listening, our theory—all of us in this realm that are thinking like you and I—[is that] it's not just the infection; it's infection plus a weakened immune system. How I describe it is that most functional medicine is toxic load and infectious burden and where those two things play. And how does the immune system stay resilient? Truthfully, I believe there are tens of thousands, maybe hundreds of thousands, of people walking around who got bit by ticks, spiders, or other carriers of these kinds of illnesses and are walking around without symptoms at all. So if we test the main population, we'd find a lot of people who have infections who don't know it; they don't have symptoms.

**Dr. Jill** 07:12

So why do some people present with symptoms and other people don't? Well, that's our immune system, which is very relevant in the time of the pandemic because our immune system was created to keep old infections at bay. And I've also heard this from one of the doctors years ago who talked about this: Virulence. The Ebola virus will kill a person in three days. Lyme and Epstein-Barr are actually very low virulence. They have a life cycle of about four weeks, so they don't rapidly divide. So their virulence and their ability to kill a person are actually extremely low. It should be low risk. But what happens is that bar drops in the immune system due to our stress and toxic load—and we'll talk about those factors—and then these things pop up.

**Dr. Jill** 07:51

So yes, there's an infection, but just throwing sledgehammers at the infection isn't the answer. And that's what you're going to talk about. So I love, love, love that. First of all, why I framed this a little bit [is that] I would like to hear your thoughts on [how] you and I are seeing epidemics of chronic complex illness at a whole new level than we saw 10 or 20 years ago. Why do you think that is? And why are we seeing so much more of this?

**Dr. Darin Ingels 08:18**

Yes. Well, again, the world is just more toxic in so many ways. I think it's toxic, literally. We're just exposed to more chemicals, mycotoxins, and all these things in our world that can undermine our immune system and make and keep us sick. And that load a) increases, but b) we've learned so much that there is a generational transmission of these toxins. It's not even about what the child gets exposed to; it's about what mom and dad and the grandparents have been exposed to. We've seen this with heavy metals, and we've seen this with other toxins. Each generation is a little bit sicker than the generation before. That's been going on for decades. [With] the increased exposure to toxins and generational transmission, not to mention mentally and socially, I feel like it's a more toxic place for a lot of things. I think COVID-19 has brought that out in a lot of different ways in terms of what we see with social media and what we see with people's mental health. It's a tough world to live in right now.

**Dr. Darin Ingels 09:20**

I feel bad for kids in school, whether they're in grade school, high school, or college. Being away from your friends, being locked up, being not in your normal pattern—that takes a toll on our bodies. I see a lot of young people who have really struggled. And kids—generally, we think of them as being very resilient. We've seen a lot of young people who have really had a very hard time because of what's going on. So that combination of exposure, lack of resilience, and everything else going on—diet is a huge part of it—all of that keeps adding to our load. As the load gets higher and higher and higher, it's like the big Jenga thing, right? Once it gets tall enough, it just topples over, and people become more and more symptomatic.

**Dr. Jill 10:03**

And people think, "Oh, I have to go on this massive 30-day cleanse" or this or that, but what you and I are talking about is that there are daily things. I always say clean

air, clean water, and clean food. That sounds so simple. People gloss right over it, but that might be 80% of the healing: Clean food, clean air, and sleep. Talk about just a little bit on some of those basic levels of—I'm sure you talk about sleep and food and stuff—where do you start with your patients when they come in and they've got Lyme? And of course, I want to go into the treatments and other things. But where do you start with them as far as the basics?

**Dr. Darin Ingels** 10:37

Yes. Well, like you said, you and I see very complex people with complex illness. There are so many different layers. And again, I like to start simple. It doesn't have to be as complicated as the person sitting in front of you. For me, gut and diet are the cornerstones. I mean, that was the running joke when I was in naturopathic medical school: If you had no idea what to do with someone, just treat the gut. Treat the gut, treat the liver. You're probably going to get some benefit, because a lot of people are poor detoxifiers, or they're just so overloaded that they can't clear all the gunk out. So if we can start with that foundational stuff...

**Dr. Darin Ingels** 11:09

The gut is so important because up to 80% of your immune function stems from the gut. That's where you digest your nutrients. That's where you absorb them. If you're not getting everything you're eating, even if you're eating good food, if you're not extracting all those healing nutrients, the body just has a hard time repairing itself and doing all the things that's built into the DNA to do. So it could be as simple, like I said, as clean food and clean water.

**Dr. Darin Ingels** 11:32

And this doesn't have to break the piggy bank. I think a lot of people, when they get into functional medicine, see these dollar signs going, "Oh my gosh, it's going to cost me a fortune!" I'm like, "But it doesn't have to." There are some very simple things you can do, even without the guidance of someone like you and me. You can choose to buy clean food. Does it all have to be organic? No. If it fits your budget, great. But you know what? You can go to Costco and buy organic frozen broccoli that's super cheap. The largest retailers of organic foods are Costco and Target. You don't have to go to Whole Foods and spend an entire paycheck getting three organic lemons. You can actually do it.

**Dr. Jill 12:11**

Right. We can get wild salmon, organic broccoli—all those things, like you said at Costco. I had to laugh too, because I'm thinking of way back in the beginning. I remember a basic elimination diet as one of my first tools. If you're listening and don't know what that is, it's eliminating the food allergens that are common to most people, which are gluten, dairy, soy, corn, eggs, sugar, and alcohol. Those are some of the main ones. I remember doing a 30-day [diet] saying, "Okay, I want you to go 30 days on this diet." I didn't know what I was doing. But they'd come back and be like: "My joint pain is better. My sleep is better. I feel more energy." I'm like, 'Really?' We know that food works, but even back then, I remember being surprised at how profound this very simple intervention that anyone could do without a bunch of pills, supplements, or doctor's visits worked.

**Dr. Darin Ingels 12:52**

Yes. Well, I don't think you can outdo an unhealthy diet. You can take all of the pills until the cows come home, but if you're living on processed foods and junk foods, it's going to be really difficult to feed your body nutritionally enough to overcome whatever illness you're dealing with. This is something that can be quite simple. I don't think it has to be something that is super expensive and complicated. Just choosing to go to the grocery store, buy your food, eat out less often, and get clean water—these very, very simple things can have such a huge impact. And from everyone I've learned from in naturopathic and functional medicine, they all echo the same thing: If you really want to heal a chronic illness, you've got to get your diet and your gut in good working order. And again, it doesn't have to be super complicated.

**Dr. Jill 13:44**

Very good. And then I heard something in your story: You were starting a practice, and this all happened around that time. First of all, just incidentally, did you have a rash? You and I know there often isn't a rash with a tick bite, but you clearly had some infection. Did you get a rash with that bite?

**Dr. Darin Ingels 14:00**

Funny story: When I started getting sick, I had meningitis when I was in college. I had a throbbing migraine. I had a 105 fever. My whole body hurt. I had neuropathy. My first thing was, "Oh my gosh, I have meningitis again." This was June in Connecticut. It was really hot outside. Ironically, I had been seeing patients that

morning, which, in retrospect, was a really bad idea. If I thought I had meningitis, I really shouldn't have been around people. We live and learn. So anyway, I saw my last patient. I was changing clothes. I was getting ready to go to the hospital. And someone I was with, as I changed into shorts, said, "Oh, what's that on the back of your leg?" "What are you talking about?"

**Dr. Darin Ingels** 14:43

So I did the double mirror thing and saw a big target right on the back of my leg. I'm like: "Okay, well, we can skip the hospital now. I know what it is." So I go to the local urgent care center, and of course, they're like, "Why are you here?" I'm like, "Well, I have Lyme disease." And they're like, "Well, how do you know you have Lyme disease?" I'm like, "Because I have a big freaking target on my leg." And then, all of a sudden, "Okay, you have Lyme disease." So I was one of those fortunate people who actually did get a rash. But you're right. [With] the majority of people that I see in my practice who have Lyme disease, maybe less than 20% get a rash.

**Dr. Jill** 15:13

Well, you mentioned someone actually pointed it out on the back of your leg. You could have potentially missed that. You clearly had clinical symptoms. But I think even the people who might have gotten one and missed it... By now, if you've heard me or Dr. Ingels, you don't have to have a history of knowing you had a rash to be treated or to have Lyme. But I think about 30% of people actually have a rash.

**Dr. Darin Ingels** 15:35

I know, and it's really sad because the CDC says on their website that up to 80% of people with Lyme disease get that classic rash. If you look at the research, the research suggests it's less than 50%. And yes, those of us in clinical practice will say maybe 20% to 30%. And even in that 20% to 30%, often it's not a bull's-eye rash. It looks like a bug bit you. It's just a flat, red, splotchy thing. I think it's very easy to overlook. But yes, the lack of the rash certainly doesn't exclude the possibility of something like Lyme.

**Dr. Jill** 16:07

And like we said, I have a history of Ehrlichia, Borrelia, Bartonella, and Babesia. And I'm doing great now, not even being treated like you. But all that to say, I don't ever



recall a rash. I grew up in tick country and hiked in the woods all the time. I pulled ticks off me as a child all the time. So I know I had multiple exposures.

**Dr. Jill 16:26**

One other thing I wanted to bring to light when you talked about your history was that you started a practice. So how does stress play into this? I see [with] my patients that, often, at a time when there is some other infection, surgery, or stressful event, it pops up. Can you talk just a little about why that might happen where you either have an infection that you got bit by a tick or an infection years prior that starts to manifest in real-time in a stressful life event?

**Dr. Darin Ingels 16:51**

If you want to take one single thing and make any chronic condition worse, that would be stress. I see it in my Lyme patients, MS patients, chronic fatigue patients, and fibromyalgia [patients]. When they go through any stressful events in their life—divorce, death of a family member, change of job, whatever it is—often we'll see their symptoms worsen. And we look at the research. We know that stress is the one thing that can really undermine your immune system. So all these things that lurk in our background become opportunistic. So whether it's Lyme or a virus like the Epstein-Barr virus, all these things can come to the surface when the immune system isn't keeping things in check.

**Dr. Darin Ingels 17:31**

I always think of stress and talk to my patients, [telling them]: Life has stress, right? We can't avoid it. It's just the nature of being human. How do we teach our bodies how to master stress and say, "We just need to manage your stress better"? I mean, it sounds easy on paper, but we know that in reality, it can be very challenging. So for every person, I think it's different what really helps them master their stress so that when you do have these events that come up in life, your body is more resilient.

**Dr. Darin Ingels 18:00**

There are programs out there like DNRS from Annie Hopper, the Gupta program, and HeartMath. [These are] ways that we can train our brains not to react to stress in the same way. And I think ultimately, that's how we master our stress. Like any organ in your body or your muscle, you have to train it to be strong, and our brains

are the same way. So how do we do that? Again, fortunately, I think there are programs out there like that that do help us master our stress in a better way.

**Dr. Jill** 18:27

Yes, I love that. It's very interesting. So I've just finished one of my new favorite books, Stephen Kotler's *The Art of Impossible*. If you haven't read that, it's about hacking flow states. Flow is basically this state of optimal performance. Our creativity is going and we lose time. It could be when you're skiing, surfing, or doing some activity. For me, I'm in flow when I'm seeing patients because I just love what I do and I'm totally centered. I forget time. Or it could be when you're creating a painting, writing music, or writing a book. So that's flow.

**Dr. Jill** 18:56

And this is relevant. I promise, I'm getting to the point. What I wanted to say is that I remember back in the day when I learned Selye's triggers for stress [and] for a cortisol response. This is science-based. It's novelty, unpredictability, and a threat to the ego and sense of control. So those are the four things that can cause a cortisol response. Well, as Stephen writes in his book, there are multiple amazing things in that book, but one thing is the inducers of flow states. And guess what? It's almost identical. It's novelty, unpredictability, and complexity. So the one is different there; instead of a threat to the ego, it's complexity. So novelty (new) unpredictability (something unknown) and complexity. So that's the inducer of a cortisol stress response.

**Dr. Jill** 19:40

But on the other hand, if you flip it and you're looking for creativity, those are the same inducers of a flow state, which is a very positive experience. So I love that you talk about this. Just like if you're getting ready to speak in public... Now, I've done that a lot. You probably have too. I don't get nervous anymore. I love it! But back in the day, on day one, when I did... What you can do is switch that mind track and instead of being anxious, you're excited. Your body doesn't know the difference. So there's these flips that we can do around illness, around everything that we experience.

**Dr. Jill** 20:11

And think of it as when we start to get curious; curiosity is the thing that can kind of transform it. Instead of having fear, if we're curious... For example, if you had that fever and didn't feel well—and I've had times too when I've had symptoms—what I try to do when I start to have symptoms is get curious: "Huh. I wonder what's happening here. I wonder what I can learn from this. I wonder what I could try to fix it." And that really changes the mindset instead of going down a path of, "Oh my gosh, I'm going to die!" right?

**Dr. Darin Ingels** 20:36

Yes. Well, you said that word right there, fear. I think that that brings so many things to our being that sometimes become obstacles. It's fear of the unknown. "Am I ever going to get better?" It's the fear of, "Is the world going to open up again in the pandemic?" I think all this fear has a negative impact on our brain and our immune system. So overcoming that fear in whatever way that comes is, I think, a big part of improving our mindset and our mental health. And again, I think the last year and a half has proved to be very challenging for a lot of people.

**Dr. Jill** 21:10

Yes, I've seen a lot of split: Either people who really go down a bad fear path, [experiencing] anxiety, [they] stay home, [maintain] total isolation, no social contact... It has really shown a different path in two different ways. Now, let's see. I feel like with this chronic illness, there are a lot of people who stay ill and don't get better. And then [there are] some people like you and myself who've been through this who actually have a diagnosis of Lyme disease and other co-infections and get well. And even with a chronic autoimmune disease, which I collected them as well—

**Dr. Darin Ingels** 21:43

It's not a competition.

**Dr. Jill** 20:36

I know, right? But I want to talk about: What is the difference there? What is the difference between those who have treatment and [those who] don't get better? And of course, you were there in the beginning. Talk a little about that experience and what you learned through that.

**Dr. Darin Ingels** 21:58

Well, I think when I see people who aren't getting better, it's a combination of a lot of things. Is it really that that root cause of illness hasn't really been addressed? And I suppose if you're working in the conventional medical system, that's a pretty common problem because they're really disease-based practitioners; they're not wellness-based. They're coming from a very different perspective. But I think often it's just that thing, whether it's an underlying infection that you just haven't identified yet, if it's unresolved emotional trauma, or if it's some ongoing toxin.

**Dr. Darin Ingels 22:34**

I know you and I both see this a lot in our practice: People living in a moldy home. If you're surrounded by mold mycotoxins all day long, a lot of other things you might be doing to improve your health just aren't having the same impact. There's that constant toxic exposure that's undermining your immune system, damaging your mitochondria, and doing whatever else it is to your body that keeps you from getting well. So that's where you and I are always constantly looking: What are those things that are obstacles to cure? What are those things that are getting in the way?

**Dr. Darin Ingels 23:03**

We know it's built into our DNA to heal. This is a normal cell response. The reason you cut your finger and it heals, even if you don't necessarily stop the bleeding right away, is that our body has the wisdom to do that. We just need to allow that process to naturally happen. And I think even if you've got a pretty serious chronic illness, there's at least that capacity for the body to right itself and get back on that pathway of healing and recovery. So it's really just looking at: Is this really the right treatment that you're undergoing? We do this with our patients. I did it for myself. I tried something; I didn't get a lot of clinical benefit. Then I tried something else. And you know what? That was the magic combination. That was the thing my body needed to get to the next level. So it's an ongoing process of evaluating whatever you're doing. Is it helping?

**Dr. Darin Ingels 23:51**

And I think where some people sometimes get mentally stuck is that there's improvement, but it's slow. Or it's not as significant as they would expect, or they want it to go faster. And I just tell people: "Look, your body has a process. Some people's process is quick and other people's a little bit slower." But as long as you're

moving in the right direction... [It's about] understanding that healing from a chronic illness is often a roller coaster, right? We have those days when we feel pretty good. Other days are like: "What happened? Nothing changed my life and I feel terrible." But we know that it will eventually go up again and you'll get back on track. So as long as we're seeing continual progression, even if we have a few backslides, we know that whatever we're doing is getting your body into the right position and we need to keep pushing forward.

**Dr. Jill** 24:34

I love that. So I want to talk a little bit about how you'd approach a new patient with Lyme. Do you test or do they bring in tests typically? And then [I'd like to know] where you'd start with treatment. One interesting thing, though, that I'm hearing you say, and I see this a lot when people are stuck, [is that] I'm always like, "What else?" I will say there's a very large percentage of patients with a chronic infection like Lyme [where] they get stuck, they're not moving forward, and they have mold in their home or environment. So that's a really big thing.

**Dr. Jill** 25:00

If you're stuck and things aren't getting better, make sure there's nothing super toxic in your... And it could be stress, a really difficult relationship, or a job that you hate. Those could actually be part of it too. But usually, there's something. If your treatment protocol with Dr. Ingels or myself is stuck, there's probably something else that's going on. So how would you approach your patient who first comes in with a likely diagnosis of Lyme or a previous diagnosis of Lyme? Where would you start with that?

**Dr. Darin Ingels** 25:25

So if we don't know if that's part of what's going on, I still test with the understanding that the tests are not great. If we get a positive, at least we know that's what we're dealing with. So if it's Lyme plus co-infection, it kind of helps tailor what we need to do for the individual. At the end of the day, Lyme is specifically a clinical diagnosis; it's not a lab diagnosis. I was a microbiologist before I was a doctor. I used to do Lyme testing for a living. Even then, 30 years ago, we knew that the tests weren't great and they haven't changed much since.

**Dr. Darin Ingels** 25:56

But once we've established that that's part of what's going on, then, to start, what are the things that we think are having the biggest negative impact on your health? What are the things that are stopping you from getting well? And again, often it's Lyme plus all the other things. So for me, it's gut health. It's diet. We always start with that because if that's not working well, everything else I'm going to do thereafter is probably going to have the same impact. And then, often, we're using herbs to help target the infection.

**Dr. Darin Ingels 26:25**

I prefer herbs over antibiotics unless it really is acute Lyme disease, just because there's pretty good evidence that antibiotics long-term don't really do what you want them to do. And there's the risk of damaging your own microbiome and mitochondria. [I prefer] herbs because they do so many different things in addition to targeting the organism. They're anti-inflammatory. They promote better circulation. They boost your immune system. So we'll put together a preparation of herbal products to help deal with that.

**Dr. Darin Ingels 26:51**

Beyond that, we start getting into all the lifestyle factors: The sleep, the movement, the stress, and then, of course, looking at all the different exposures to toxins. I think mycotoxins, in particular, and Lyme disease are probably the two clinical syndromes that mimic each other the most. And people say, "Well, which one's causing which?" I'm like: "Eh, I don't know. I mean, there's no way for me to know." "I'm tired all the time." Well, great; fatigue is a common problem to about a million things. And until you start going down a treatment path and see how much the symptom changes... It gets 50% better. Great. I know that was 50% of the problem. But in reality, often I think [about] what leads to chronic illness, and we alluded to this earlier: Do you believe in the germ theory or do you believe in the terrain theory? I think we're all in the camp of: It's really the terrain.

**Dr. Darin Ingels 27:36**

We've seen this with COVID-19. There are some people who get no symptoms, others who get minimal symptoms, and some people died from it. It's different reactions to the same thing. So what's the difference? The difference is the terrain. As I sit down with patients, I think about [how] my goal is to get you healthy. In getting you healthy, your body's ability to respond to anything should get better. So

as we clean up the diet, as we work on gut health, as we get your toxic load down, and as we do all these other things, no matter what your diagnosis is, my expectation is that the body will start to do that process of healing on its own. So it's really, how do we start fundamentally getting you healthy? And, of course, that's a function of what you're willing to do and what your budget might be. And we take all that into consideration and start that treatment plan.

**Dr. Jill** 28:22

And where is your practice located, Dr. Ingels?

**Dr. Darin Ingels** 28:25

I'm in Irvine, California.

**Dr. Jill** 28:27

Okay. And are you taking new patients?

**Dr. Darin Ingels** 28:29

We are.

**Dr. Jill** 25:29

Okay, good. So we'll just make sure to include all that in the side notes. So you mentioned herbal protocols and just your own experience with that. I couldn't agree more. There are times when I use antibiotics, but I absolutely prefer, if possible, a more gentle approach. It's so much more synergistic. And we're usually dealing with a viral load and a fungal burden, so if you just use the antibiotics, those things don't get better. So I love that. Are you creating your own herbal remedies? Are you using some of the ones out there? These are so complex, I don't expect you to give us the whole protocol. But just the basics of what kinds of herbs you're using or what direction you go with that.

**Dr. Darin Ingels** 29:05

So fortunately, we have so many different products available to us. There are certain combinations I found to clinically work well with minimal side effects. I use a lot of Dr. Zhang's herbs. He's the doctor who treated me in New York City. His [herbs] are Chinese medicine formulas. A lot of them are based on traditional Chinese medicine. So these herbs have thousands of history of use. And we've also

learned a lot about what they do biochemically. So I use a lot of his herbal formulas. I use a lot of the products that Dr. Lee Cowden developed. I've met him several times and learned from him. In fact, the one thing he says about a lot of these herbs I actually love is, "Well, this herb's a keep herb. This herb's a keep herb." And I finally had to ask him: "What's a keep herb?" He goes, "Well, it kills everything except people."

**Dr. Jill** 29:49

I love that! I agree.

**Dr. Darin Ingels** 29:50

It's antibacterial. It's antiviral. It's antifungal. It's antiparasitic. So the nice thing with herbs is that when we're using antibiotics, often we do have to put in an antifungal so we don't create a fungal overload and so forth. But with these herbs, we don't really have to do that because it's kind of keeping your ecology in check. So I use those.

**Dr. Darin Ingels** 30:08

I'm actually in the process of developing a line for allergy research that's going to come out this summer. I've got a very specific formula that has a combination of herbs that I find clinically really helps target Lyme. And I try to cover all the co-infections. So I'm kind of hoping this will be a one-stop shop where we can cover a lot of these different Lyme and co-infections in one formula. So look for that. That's going to be coming out this summer. Yes. So we've got a formula for recovering tick-borne illness. I've got a formula for managing Herxheimer reactions. I've got one for managing mitochondrial function. And then we've got one to help breakdown biofilm. So I think that's going to be a good combination for people dealing with tick-borne illness so that they're not taking a thousand other things.

**Dr. Darin Ingels** 30:50

But beyond that, Steven Buhner has some great herbs. Beyond Balance has great herbs. Byron White has great herbs. They're all really helpful. And it's a function of whether they tolerate capsules or tinctures. But the beauty of this is that whether it's a child or an adult, we can find a combination that works for everybody. And everyone's sensitivity is different. I like liquids for sensitive people because we can start with one drop a day. And for anyone out there who's been told that: "Oh, herbs



don't really work. They're not that strong." I have patients take one drop of one herb and they get a die-off reaction. So that's nonsense. And again, everyone's sensitivity is different. So it's just about finding what works best for the person.

**Dr. Jill** 31:29

Good. Let's talk a little bit about the Herxheimer reaction, because that's something we all deal with. What do you like to use? Are there any specific individual herbs? I know you've got the formula coming out. We'll be watching anxiously for that. What else do you like to use for either that or just how you do the protocol? That's part of the key to it, isn't it?

**Dr. Darin Ingels** 31:47

One of my favorite things for managing these die-off reactions, Herxheimer reactions, is bicarbonate, whether it's Alka-Seltzer Gold or trisalt, which is a combination of sodium, potassium, calcium, and bicarbonate. Bicarbonate, when you alkalize the body, actually helps down-regulate that inflammatory response, that toxin response. I've used it with kids having asthma attacks. I use it for people to just get run-of-the-mill mast cell activation. Bicarbonate can be incredibly powerful.

**Dr. Darin Ingels** 32:14

And when you look physiologically, when you make your cells more alkaline—with the exception of your skin, your stomach, the bladder, and the vaginal area for women, which are very acidic to protect against outside invaders—the rest of your body is more or less alkaline. So just like we can't grow crops in acid rain, your body's kind of the same way. It needs that alkaline environment for cell repair, for all the enzymes to work the way they should, and for detox pathways. So, that's a very, very cheap, inexpensive way to help manage Herxheimer reactions.

**Dr. Darin Ingels** 32:42

Beyond that, there are herbs that are anti-inflammatory. Things like curcumin can be helpful. Things like boswellia can be helpful. Burbur Pinella from NutraMedix is a great product to help manage Herx. Beyond Balance has one called IMN-CALM. That works really well. So, there's a bunch of herbs that can help down-regulate that response if people are getting die-off.

**Dr. Jill 33:03**

Oh, these are great. And I would add that just plain old mineral water like San Pellegrino works kind of like the trisalts. You can buy a case of Pellegrino at Costco. It's funny when people start to drink that and realize, "Wow, I feel so much better." It's just drinking mineral water. And then Epsom salt baths, too, are another just [inaudible]. And again, I know you know all these, too.

**Dr. Jill 33:38**

Like I said, with COVID and all this that is happening, are you seeing some of the long-haulers and the people who've been post-infection this last year? And to me, there are similar patterns with all the stuff we've just talked about. Any thoughts on that or any specific things that you're doing in that realm with the inflammation post-viral?

**Dr. Darin Ingels 33:45**

Yes, it's funny; we really didn't see long haulers until the end of last year. So, for the first half plus this pandemic, we really didn't see hardly anybody that either had COVID-19 or long-haul [COVID-19]. That seemed to come a little bit later. But yes, what we've been doing in our practice is really supporting the immune system. Glutathione has been critically important for anybody with long-haul [COVID-19]. And of course, anybody in the Lyme or tick-borne illness world looks at long-haul COVID-19 like: "Hey, welcome to our party. We've been living with this..." This is not unique to COVID-19, by the way. Post-infectious illness has been around for decades. It happens with COVID-19, but it [also] happens with Epstein-Barr, Lyme disease, and a bunch of other things. So, from that perspective, that's not new. But for the COVID-19 people specifically, we found that glutathione has been really helpful. [It has] lots of antioxidants [and is] very helpful.

**Dr. Darin Ingels 34:37**

We've been using a lot of herbs, specifically addressing the liver and improving liver detox pathways. That's been incredibly helpful—with all the other diet and lifestyle things we've already discussed. And by and large, when people follow that plan, [even if] it's now been weeks or months of not feeling well, people start to turn that corner pretty quickly.

**Dr. Jill** 34:55

Yes, excellent. And hydration is such a big deal. We talked about that earlier, but people are so often walking around dehydrated. And getting them to drink more water, especially electrolyte or mineral water, is so key.

**Dr. Jill** 35:07

So, going forward, what about prevention? Do you recommend any prevention for people who are hiking or camping? I think part of our infringement on the areas that were previously forested—deer and mice and all this—is part of the issue because it's becoming endemic in all states in the U.S. We see cases everywhere. Any suggestions on prevention or those kinds of things?

**Dr. Darin Ingels** 35:32

Absolutely. You know, it's funny; they published an article a few weeks ago here in California that they found ticks on the beaches of Southern California that carry Lyme disease. We used to think the beach was a safe haven, right? You had to go "hiking in the mountains" to get exposed. And like I said, they're really everywhere. We know from the migration patterns of birds that basically the tick hops on the bird, the bird carries it to some other state and then they get a new colony of ticks. So, ticks are really everywhere these days.

**Dr. Darin Ingels** 35:59

But if you're going to be outdoors and you're concerned and if you do live in an area that's endemic or if you are going to be hiking, camping, fishing, [or doing] those kinds of things, [use] long pants, socks, shoes, and long sleeve shirts. If you're going to be in an area where there might be an overhang, wear a hat. Essential oils—there are several great products that have different essential oils that are known to help repel ticks. So, they're natural tick repellents.

**Dr. Darin Ingels** 36:24

I don't really advocate using DEET or permethrin. I think these are potentially toxic, particularly if you're using a lot of them. And there's some new clothes out there where they soak them in permethrin and then you don't have to put the chemical on you. But every time you sweat, you're going to soak it through the skin. Your skin is a nice sponge. It will absorb some of those potential chemicals and toxins. But the essential oils work well. If you know you're going to be out all day, bring enough

that you can apply every hour or two. But again, it's safe on your clothes and on your skin. Just make sure you get it away from your mucous membranes.

**Dr. Darin Ingels** 36:55

And of course, do tick checks after your outdoor activity. So, if you've got little ones, strip them down. Ticks like the dark, warm, moist areas of our body—behind the knees, under the butt cheek, in the armpit, behind the ears, the hairline. And these ticks can be tiny, right? They're sized like a poppy seed. So, you're literally looking for a needle in a stack of needles, but I think it's still wise to do tick checks. And if you're an adult and you're okay with somebody else looking at you... Again, I got bit in an area that I didn't see, so it would have been helpful if someone had done a tick check on me. But [do] as much as you can. Again, it's not perfect, but it at least minimizes the risk of getting bit by a tick that carries Lyme.

**Dr. Jill** 37:38

Excellent. And the thing I would love for you to speak a little bit on... I'm in Colorado so, of course, it's non-endemic. I see tons of cases. But one thing I found very interesting, and one reason why IGeneX is my preferred lab—and I have no association with them—is tick-borne relapsing fever. I think this is becoming more and more common. And most other labs are not able to test that. So, if you're going to do a Lyme Western blot on Labcorp, Quest, or your hospital, they're not checking for that. Any comments on tick-borne relapsing fever?—because I'm seeing more and more of this show up.

**Dr. Darin Ingels** 38:10

Well, the one thing I've observed [is that] because IGeneX is the lab doing most of that testing, there is cross-reactivity between *Borrelia* species. And what I see for a lot of people who get a lab-positive tick-borne relapsing fever [is that they] do not have any clinical symptoms of tick-borne relapsing fever. So, as the name suggests, you should be having a relapsing fever. And for people who don't get that... A lot of people have classic symptoms of Lyme disease, but they don't get the relapsing fever. So, I think there is some cross-reactivity with the *Borrelia* species. What causes the relapsing fever is just a different strain of *Borrelia*. But yes, IGeneX is a great lab.

**Dr. Darin Ingels** 38:46

I use a lot of Medical Diagnostic labs, only because they bill insurance. And they're the only lab that will actually send you a copy of the Western blot. So, again, I was a microbiologist; I know exactly what to look at. I can see which antibodies are there. I can see the strength of the antibody. IGeneX gives you their interpretation of the report. I like to look at it myself. So, I think their Western blot is better from that perspective. But they're both great labs. I use them both. I just like MDL because, again, they bill insurance and it saves people some money.

**Dr. Jill** 39:14

This is such great information. I've used them a little bit, but not as much. And I would love to start using them more for that reason. In the last couple of minutes, you mentioned your diagnosis of MS and you're obviously stable and doing great. And I would say, gosh, maybe 80% to 90% of my patients with MS have tested positive for Lyme disease. I think there's obviously a correlation because that's a trigger to our immunity. Let's talk just a little bit about that. What are your thoughts on the connection between your previous diagnosis and that? And obviously, you're in good shape, being on some protocols. What would you suggest for a workup with someone with newly diagnosed MS? How would you look at it differently than a conventional neurologist?

**Dr. Darin Ingels** 39:52

Well, conventional neurologists are all doom and gloom. So, if you get the diagnosis, they're just going to tell you that you're going to progressively get worse. "At some point, you'll end up in a wheelchair. And we're going to give you medication to try and slow the train down, but there's nothing you can do." But we know from clinical experience and actually from some research that there is the possibility of remyelinating these damaged nerves. And the association with Lyme specifically, when you look at the research, we know that there's an autoimmune event that Lyme can trigger that can target your brain and your peripheral nerves. So I think that when Lyme has been persistent in trying to attack the organism, it accidentally starts attacking your own tissue. And I think we get into this event too.

**Dr. Darin Ingels** 40:36

It's like, do we ever completely eradicate Lyme? Because we can't measure Lyme directly in the body, we don't really know. I'm of the opinion [that] I don't think we do. I think once it's in you, it's part of you. It becomes like the Epstein-Barr virus,

you learn how to live with it without it causing a problem. It's not that you can't get symptom-free, but I've seen people go years of being symptom-free. And again, some trauma comes up and then it starts to resurface and they have problems again. But the nature of Lyme and all these other infectious agents in [their] ability to trigger autoimmune disease, we've got mounds of research showing that Lyme, Epstein-Barr virus, Klebsiella, Parvovirus, and on and on and on can trigger various autoimmune conditions.

**Dr. Darin Ingels** 41:18

It just so happens that Lyme, Epstein-Barr, and human herpes 6 are very much associated with MS, specifically. Just using my own example, I think I had Lyme. It was persistent for a long time. It set the stage. And then even after that, I had a lot of stress from running a business, getting divorced, and all these other things that just added to my stress plate. I don't think I was managing it or mastering it very well. And again, shortly after that all ended, that's when the symptoms started to creep up again. So, it's probably an issue of the perfect storm. And if you're able to manage that, you can probably stave that off. If someone comes in and they've been diagnosed with MS, the first thing I look at is Lyme and tickborne illness to see if that's part of the picture. And I've had a lot of MS-diagnosed patients where we treat their Lyme disease and their MS symptoms get better.

**Dr. Jill** 42:06

Yes, I couldn't agree more. So, I wanted you to talk about that because I see the same thing. I have a dozen or more patients who have MS. I think every one of my patients has Lyme and there is a correlation with infectious burden. So, let's end with: Where can people find you? Tell us about your book. I highly recommend it if you haven't read it. I'll be sure to include all your links. But tell us just a little bit more about where they can find you and what else you're doing in the next six to 12 months.

**Dr. Darin Ingels** 42:31

Sure. Well, if people just go to my website, it's [DarinIngelsND.com](http://DarinIngelsND.com). And if you don't know how to spell it, just check out the show notes. I'm sure she'll spell it correctly for you. Yes, and I have a masterclass that I'm going to be launching in August. It's an overcoming chronic illness masterclass. So, it's everything you and I have just been talking about. We're going to go into a very deep dive about: What is it that

gets you sick? What is it that keeps you sick? And then, how do you turn that bus around and start to feel better? And the cool thing about it is that it's absolutely free. So, no charge at all.

**Dr. Darin Ingels** 43:03

So, if you guys are interested, please go to my website and sign up for my email list. When we're ready to launch and get people signed up, we've got you there. And we've got a lot of information we want to share with you on a weekly basis about how to get healthier and how to overcome Lyme disease, if that's what you're dealing with. I think it's going to be a really great resource for people. So, again, we'd love for people to sign up. Again, if you're interested in the book called The Lyme Solution, it's available on Amazon and at every retailer that sells books.

**Dr. Jill** 43:32

Awesome. And what a great thing that you're offering this for free! That's tremendous! I'm so excited. And I just love, love, love the great work you're doing and the great information you're bringing out. Thank you so much for coming on today! I appreciate you.

**Dr. Darin Ingels** 43:46

Oh, thank you so much, Dr. Carnahan! I appreciate it.