You Killed the Bug… So Why Are You Still Sick? Transcript

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Opening wellness advice

Start simple, start slow, make it easy on yourself. Don't be hard on your self. Again, I think three things I would think of right off the top of my head.

Start eating real food. The more you can get away from processed food, junk food the less hands that touch your food that better. That again doesn't have to be difficult or expensive.

Number two is start looking around your home, cleaning up different toxic things that might be adding to your total body burden. Again, not difficult, Not expensive.

And, you know, try and get in the habit of doing something for yourself every day for you. I think your mental well-being is so critically important. Because if you've been dealing with a chronic illness, it's really easy to get caught in all the things that go along with being chronically ill, that you forget to experience joy in life.

Podcast intro and guest background

Find that thing that makes you happy, even if it's just for a handful of minutes, watch a funny movie, take a walk with someone you love, and whatever it is for you that brings joy to your life, because I mean, at the end of the day, Welcome to the TBD Fit Podcast on Dr.

Talks. I'm your host, Daniel Keeley, and I will be guiding you through this wellness journey in terms of optimizing health and longevity, where we unpack the science, the dos, dos and everything in between.

Come join us. Look forward to seeing you inside. Welcome back to another episode of the TBD Fit Podcast, where we explore functional medicine, performance, health optimization, and the forces behind true healing.

I'm your host, Daniel Keeley. And I am a functional medical practitioner. Today I have with me Dr. Darren Ingalls, who's a naturopathic physician, author of The Lime Solution, which we're going to unpack today.

expert in environmental medicine, chronic immune dysfunction, and someone who's walked the path himself. Definitely a powerful story here. Dr. Ingalls, it is a genuine pleasure to have you on the show today.

Well, thank you so much for having me. So I love starting every episode with learning about the guest or at least showcasing that to our audience. We all have a story which often creates a purpose for nothing else.

And so I would love for you to be able to share your story. Sure. Well, you know, I'm a naturopathic doctor by training and after residency in Seattle, i moved to Connecticut and I was there just a little over a year and i was getting ready to open my own practice literally two weeks from opening my front doors and got Lyme disease.

And I remember, you know, having 105 fever and joint pain and neuropathy and a bursting migraine. And, I had meningitis when I was in college and I thought I'd had meningitis again and was getting ready to go to the hospital.

At the time, changing clothes to get ready, and my ex-wife says, hey, what's on the back of your leg?

Dr. Ingalls' Lyme disease story

I don't know, I can't see the back of my leg. So I pulled out the double mirror and saw a big, huge bullseye rash. And I said, okay, well, we can skip the hospital.

I know what this is. Then I went to urgent care and got treatment for Lyme disease. Four or five days into

doxycycline, and I felt perfectly fine. But, you know, when I first opened my practice, my ex-wife was an acupuncturist and we practiced together and, couldn't afford staff.

I was new, new doc. And so we were doing everything. So, working long hours, five, six, seven days a week, eight months into that schedule, I started to relapse.

and all my Lyme symptoms started coming back. And I went back on doxycycline that didn't do anything, went on a month of azithromycin, didn t do nothing, and then cycled through combinations of antibiotics for about another seven months.

In the meantime, it was destroying my gut. I felt terrible. It wasn't getting better. And I was fortunate to have seen a doctor in New York City named Dr.

Zhang, who I had heard of and had other patients who had seen him. He's a medical doctor from China and works as an acupuncturist and herbalist in new York city.

And, uh, I saw him, he started me on Chinese herbs, getting acupunture and just kind of a reminder that I really wasn't eating well and sleeping well, and kind taking care of myself.

and a month into his program, i was 80, 85% improved. It took another two years really, I get to get the last 15-20% of my energy and my strength, my stamina back, but you know, it was my own personal experience.

And then of course, living in Connecticut, and for people who don't know Lyme disease is named after Lyne, Connecticut. I lived about 30 minutes from Lymen, CT.

I just started applying what I did for myself, for my patients, and I found that there were ways of overcoming Lyme disease without having to rely on high dose antibiotics long term that tend to come with a lot of side effects.

And really fundamentally, it's about these basic tenets, I think, of naturopathic medicine about good gut health and taking care of yourself and sleeping and eating well and doing all these things we know that make the body healthy.

And of course, there were some herbs and other things I included that help, you know, get over the hump. But, uh, it took me about three years in total from beginning to end, but I got to a point where eventually got my health back.

Love to hell with it. Every story should have a good ending. I believe that maybe that's what we're total as a child. Um, but certainly in terms of health outcomes, I think if you can change the internal ecosystem, um, that becomes inevitable.

So, uh, i'm curious though, in. If we can go through the weeds pun intended a little bit here. herbals or what was different or maybe unique because I mean, there's a lot of practitioners now they're treating Lyme since becoming so ubiquitous.

But often enough when it's obviously just rotating antibiotics that comes at a consequence. So I'm curious, what were things that either he was mindful of or you were integrating or between the both of you, What was kind of that, your ability to break that course and get over the hump?

Well, I think it was a recognition. I mean, again, looking back it, was the perfect storm, right? It's like I was under a lot of stress. Again, just wasn't eating well, sleeping well doing all the things we know that normally take care of your body.

And I, think, it gave that infection an opportunity to really take root and start creating all these various issues. If you look at standard treatment for Lyme disease, most of us in the Lyne world will argue, and we're right, is that standard treatments just isn't enough.

Borrelia, which is the bacteria that causes Lymen disease is an incredibly slow growing organism. So this idea that you can treat it with 10 or 14 days of antibiotics, For the majority of people, it's not enough.

So I think in my case, that knocked it down. It didn't knock it out. And then I started having all the stress and other external factors that just allowed it to really become opportunistic and come to the forefront and start creating all these problems.

Now having worked with thousands of Lyme patients over the years, we see a very similar pattern that it is all of the other factors that drive health that we have to look at.

It's so easy, and I think a lot of doctors out there, they're treating Lyme.

Why terrain matters in chronic Lyme

And again, these are very well-intended folks. They focus so much on killing the bug that, we kind of forget about the terrain. We forget all the other parts of our body that are necessary for overcoming infection.

Our immune system knows how to handle infection, it's built into our DNA to do that. So when that isn't working properly, again what are the obstacles that in the way that stopping that natural process from happening?

And again, I think you and I could argue pretty easily that antibiotics often work against many of those natural pathways that are supposed to occur. If we start disrupting our gut microbiome, if we started damaging our mitochondria, If start creating external toxicity, all that adds to the total body burden of junk we're trying to deal with.

that just make it so much more difficult to overcome infection. So, I mean, this is where I really focus on herbs for dealing with infection, and I don't want to suggest that you don' have to do that.

That is part of the puzzle, but that's not the only piece. So this idea that we're just going to out kill Lyme for a lot of people, that isn't enough.

And I've seen people over the years, again, they go on, you know, often antibiotics, They might feel better temporarily. and then sometime within, stopping the antibiotics could be days to weeks.

you know, they're kind of back to where they were. It didn't really fix the problem long term. So, you, know I think for those of us who practice functional medicine, naturopathic medicine root cause medicine.

You know we're always looking at all these underlying factors that are again obstacles to cure. And you that's where we can we start foundationally with you no gut health.

We know that your gut accounts for 60 to 80 percent of your immune function. How are you going to overcome any chronic infection if your gut isn't functioning well?

So again, it's so easy to just kind of start of like, okay, hey, here's a bunch of stuff to kill the bug, but are eliminating well, do you have regular healthy bowel movements?

Do you we have gas and bloating and constipation and diarrhea? We really have to kind start with that piece and that kind piggybacks looking at diet too, because obviously what you put in your mouth and your eat are going impact your good.

So, you know, often we're looking at food allergies or food sensitivities, we are looking for SIBO, each pylori infection and all these other things that can disrupt your normal gut microbiome, disrupt motility, cause these various GI issues.

So it's gut health, it is diet, that's really the foundation. And then we can start moving into, okay, so what are things we could do to treat And, you know, if we want to talk about herbs, I mean, there are a lot of great herbs that deal

with Lyme and a of these co-infections.

Let's highlight maybe a few that should be foundational. Yeah. I means, Cat's Claw for me is in pretty much everyone's treatment regimen. You know it's such a well-researched antimicrobial.

It's a very potent anti-inflammatory and it is an immune modulator. And one of the things that Lymedisease and all of this co infections can trigger is autoimmune process.

And it's not autoimmunity in the way we think of like lupus and rheumatoid arthritis and these kinds of diseases, but we do know from the research that it can cause this autoimmune reaction that attacks our brain and our nervous system and in our joints.

So anything we can do to modulate the immune system, and really tamp down that overexpression of that part of the system is gonna help control inflammation.

Cat's claw is just a beautiful herb that does that as well. And again, I think that's really the beauty of herbs overall is that they have so many different constituents in it.

They don't really do one thing. You know, they're antimicrobial, their anti-inflammatory, the modulate the immune system, They might support adrenal function, there healing to the gut.

So this ability to, you know put different herbs together to really tailor to individual so that we're covering the very broad base of what's going on in the body.

That gives us a lot of flexibility that the treatment can be individualized to patient. So I love cat's claw. I loved banderol. Banderol is a plant that comes down from the Amazon jungle, comes from a bark of a tree.

Again, very potent antimicrobial. Like one called Kumanda. That's the trade name from company called Nutrometics. It's actually Otaba in Camp Seandra, that's a botanical name.

Both of these are the barks of the tree and there's woman who's research at the University of New Haven who studied the combination of cat claw camsciandra, otava, compared to doxycycline and rifampin, found that they were more effective, at least in vitro, than doxxycyclin and refampine for treating Lyme disease.

So I like that combination. Chinese skullcap is another very effective treatment for Lyne. And Chinese Skullcap treats a lot of other co-infections like Bartonella and Babesia.

Again, also a very potent anti-inflammatory. Artemisia annua or sweet annie is another effective herb, particularly for something like Babesia. And again, it's an immune modulator.

So they use Artemis for things like rheumatoid arthritis and other inflammatory conditions. Japanese knotweed is a very well established herb against Lyme and co-infections.

Again, there's a plethora of others, but those are some of the ones that we use quite commonly in our practice. Cryptolepis is another one. Yep. I like Crypto Lepus.

So there's Dr. Zhang in New York City who I talked about, who saw as a patient.

Key herbal treatments for Lyme

There's a researcher Dr Zhang at Johns Hopkins University and he and some of our naturopathic colleagues, Dr Jacob Leone and Dr Sanja Schweig have been researching different plant extracts against Borrelia, Bartonella, Babesia and Cryptolepis really comes at the top of the Top 3 tick-borne infections.

So, you know, Japanese Knotweed, Crypto Lepus, Chinese Skullcap, they're kind of always in that top tier, at least

again, in vitro. of dealing with the major infections.

So yeah, we use a lot of Cryptolepis, a use of a Lot of Hetunia. We use Cetacuta, Cysticincanis. You know, that's what I just love about herbs is that if we find, you know we start down a treatment regimen with somebody and we found that there's a particular herbs that they don't agree with or their body doesn't tolerate well, it's really easy to swap it out for something else that might be equally as effective.

And, you know, everyone who struggles with Lyme disease or tick-borne illness is kind of a unique experience, although there's a lot of herbs that help a lotta people.

There's some people that just don't tolerate certain herbs or some herbal combinations work better than others. But again, we have a lots of flexibility in using various herbs with different patients to see what gives them the best outcome.

So in terms of dosing or frequency of docing, how relevant, important is it? Or is that you're trying to hit it kind of multiple times throughout the day.

What does that look like typically? Most of the herbs that I use are twice a day dosings. Uh, what we realized is the middle of day for most people, it's just, you know, they're busy with their life, their work, or at school, whatever it is, and trying get it in.

I just found it was very difficult. And for the most of herbs we use. they can do doses in the morning, do dose in evening, so it doesn't become a terrible interference with their regular life and it keeps enough of the plant in their bloodstream to do what we want.

So something like Hatunia has a very short half-life, typically that does better at three times a day dosing, but the overwhelming majority of my patients do dosings twice a days.

And now in terms of you know, the dose. It depends. Are you using capsules? Are using liquid extracts like tinctures? are using teas? Different plants come in different forms and it kind of depends on the patient about whether we're using capsule or liquids.

I use a lot of liquids, I like a lots of tinkers just because I liked the ability to drop dose it with patients. And regardless of age and size and everything, i'm always kind amazed at how sometimes very small doses of the plants, particularly when you use them synergistically, give a really positive outcome and sometimes people only need a handful of drops a day to achieve that.

So I'm always looking for, you know, what's the bare minimum somebody needs to get that positive effect? And also from a cost standpoint, if they don't have to use as much plant, saves them a little bit of money and since all this is basically an out of pocket expense, I am always very mindful of people's pocketbook and if we can afford them good treatment at a reasonable cost.

That's great. And so the idea of using tinctures and being able to use these drop doses, again, gives us that opportunity to explore if somebody can get away using a lesser dose to get a good clinical effect.

What about testing? Where do you start? So, you know, testing the standard tests that's been, the CDC recommends. I think it's important for people to understand that the testing that is available through all the big commercial labs like Quest and LabCorp was never designed to be diagnostic.

It was designed a monitor people who had known Lyme disease. So in the 40 plus years that Lymes kind of been around, We've never really changed that testing criteria.

However, if you go to the CDC's website and you read about Lyme disease, it tells you it's a clinical diagnosis. That means it is based on your signs and symptoms, not on laboratory testing.

If you look at the research on conventional testing, the sensitivity of their two-tiered testing. So what they do is they an antibody test. It's a generic IgG-IgM combined antibody tests.

If that's positive, it flexes over to what's called a Western blot or immunoblot, which looks at more specific antibodies against Lyme disease. And it looks that IgE and IgM antibodies.

Igm is the antibody we associate with acute exposure, and IGG is more associated with chronic or persistent exposure. But the sensitivity of that initial test is only about 43%, which means it misses 57% of people with Lyme disease.

So that's a terrible test. And the longer you get away from your potential exposure, immunity wanes with time. That test at best would be optimal if your exposure was within a matter of weeks of your tick bite.

if it's been months or even years after the fact, the likelihood of picking it up on an antibody test substantially goes down. And, you know, again, we've never changed the testing criteria to accommodate that there's changes in the immune system.

There might be other things that interfere with the normal immune response. If you're on immune-suppressive drugs, if you are on steroids, there are a lot of things can change your immune responses to any microbe.

And unfortunately, up until fairly recently, we have not had good tests for direct detection where we go in directly, look for Borrelia, looked for Bartonella, for Babesia.

That has changed. We now have a lab that does offer that kind of testing. But from a conventional medical standpoint, it's still, you know, the two-tier testing and most infectious disease doctors and other primary care doctors don't do anything else.

Now, if you're working with a doctor who, you know, like an ILADS doctor, the International Lyme and Associated Disease Society, where they offer more specialized training around Lyne disease and tick-borne illness, doctors who've been through that training understand that there's other ways to look at Lymen.

There's others labs, I think, offer a more sensitive test kits.

Testing and diagnosis for tick-borne illness

better testing. I use a lab called Medical Diagnostic Labs out of New Jersey that offers really great testing and they bill people's insurance. Uh, I used iGenX, which is a Lab in Palo Alto, California, that offer really good tick-borne testing, and then Galaxy Labs is the latest lab I've been using, they now offer a direct detection a triple where they look at Borrelia, Bartonella, and Babesia.

So now we're actually looking for the organism directly. Is it there? And because of the nature of technology, I mean, it's highly, highly specific. When you get a positive, there are no false positives.

With any type of Lyme testing or tick-borne testing, regardless of what lab, unfortunately, if it comes back negative, it doesn't always exclude the possibility that you don't have an infection.

We're typically doing blood samples. There are a couple of labs that offer a urine test that may capture some of the antigens related to LyME, but We don't know that these organisms are necessarily in the bloodstream.

They may diffuse into tissue, get into other parts of the body. So if we're drawing a blood sample, and again it comes back negative, it doesn't always exclude the possibility.

But nonetheless, you know, we still go through the process of testing people. It's nice to have confirmation that this is what you're dealing with. And even from a treatment standpoint, I mean it's good to know is it just Lyme?

Is it Lyne in Bartonella? Sometimes these ticks that carry one thing carry multiple things. And I've seen some people that have three and even four infections that probably came from the same tick bite.

So herbs are nice because there's a lot of overlap in treating these various infections where when you're using antibiotics, you really need to know exactly what you are treating because some antibiotics just don't work.

for certain infections, but fortunately with herbs, there's a much broader coverage. And, you know, even if we don't know exactly what you're being exposed to, uh, There's, a good chance the herbs will cover it.

Yeah. We just added the Galaxy test as well. Uh, super comprehensive. I think it's extremely exciting just where, Uh. Both medicine is evolving, the diagnostic side of things are evolving.

It allows us to be a hyper heart target with care. So we're certainly on, on the same page there. Yeah, we are actually just starting a study, myself, Dr.

Nancy O'Hara, and Dr Lindsay Wells using Galaxy to look at Bartonella as a trigger for PANS. We see a lot of kids now that start having this sort of acute neuropsychiatric syndrome where overnight the kids change and they start to have anxiety and OCD and tics.

strange fears and cognitive changes, and we're pretty confident that Bartonella is a big driver of that. But even for people with Lyme disease, we see a lot of this neuropsychiatric symptom picture, so many people start having anxiety and OCD and these different, you know, neuropsychiatric conditions and they end up at the psychiatrist office and are prescribed some type of medication, which of course isn't really fixing the underlying problem.

And particularly if the onset's relatively acute, that's a big red flag that, hey, we need to really look at potentially a tick-borne illness. Now I've seen some people, particularly, you know, older teens and adults that have a more insidious onset.

It's not overnight. That doesn't mean that you still can't have neural inflammation, inflammation of the brain from these infections. But again, if someone's got, some sort of.

psychiatric issue, any kind of element that might suggest brain inflammation. I think it's a good rule out just to make sure you're not dealing with the tick-borne illness because clearly that's going to take you down a very different treatment path than just relying on some sort of psychiatric medication.

In the realm of PANS, what else are you noticing? What are some of the other triggers off in the correlated Well, you know, originally we called it PANDAS.

You know Dr. Sue Sueto, who's a researcher at the NIH, she's the one that coined this term and originally, we thought it was due to STRAP. So the original PANDAs was no pediatric acute, acute neuropsychiatric syndrome associated with STrap.

And we've now learned that it's not just STraph. STraft can do it. Borrelia can do it, Bartonella can, do mycoplasma can. Yeast can probably do. I think really, probably any potential organism has that ability to trigger inflammation in the brain.

But I'd say, in my practice, Lime, Bartonella, Strep, Mycoplasma, and Clostridia, which is a gut bacteria, probably tend to be the top five offenders of PANS.

It can be related to other things like mold and mycotoxins and other external factors, but the majority of cases I see do tend be to some element of infection.

So often, again, we're testing to see, you know, potentially what someone's been exposed to. You mentioned mycoplasma. That's an interesting one. How are you tackling that?

So myoplasm, again, responds really well to herbs. I mean, you could use antibiotics if it truly was acute. Antibiotics like azithromycin and doxycycline do treat myocoplastma, even for people who have a positive mycoplasma IgM test.

Usually the doctor gives them five days of a Z-Pak, which again isn't nearly enough to deal with pans. You know, usually if they're on antibiotics, they are on for several weeks, if not months.

But I found herbs actually work really well. Actually, one of my favorite, Byron White, who unfortunately, he just passed away last week. He's an herbalist and he has an Herbal Company and makes a product called Amico.

And I've had really good success using that combination of herbs to deal with mycoplasma.

PANS, Bartonella, and mycoplasma

But some of the herbs I mentioned earlier for Lyme disease often work against mycoplasma as well. So I use cemento, I used banderol, use comanda, Chinese skullcap.

But the amyc is nice because a lot of those herbs are already mixed together. It's just one tincture for people to take. And it just, it can take some time before people really start to see the changes.

but again, very safe, Very effective. and so you don't necessarily have to go to antibiotics. Are you doing any sort of additional testing for that or just The mycoplasm is pretty easy.

I mean, that's just a straight up, you can do this through any reference lab. We measure IgG and IgM antibodies. Typically when it is a problem, the Igm antibodies would be positive.

Okay. Super thorough. In terms of the environmental burden, right? I know, I think in your introduction, we mentioned obviously environmental medicine.

How are you considering this whole new factor? Yeah, well, you know, I think this is probably the biggest obstacle that everybody on the planet is dealing with right now.

You know I, think we'd agree that the world keeps getting more toxic. It's not getting better. Certainly in the United States, the amount of chemicals, pesticides, herbicides, things that get sprayed in our food gets sprayed into the air.

Uh, it just keeps, getting higher and higher. The average American gets exposed to 88,000 chemicals a year. Less than 200 have actually been studied for long-term safety.

We have no idea what the toxic soup is really doing to us. Other than that, you can just look across the population and see we have a chronically sick, chronical ill, both adult and now pediatric population.

It starts with the low-hanging fruit. What is it you do in and around your home to reduce your exposure to these different chemicals? And that's everything from getting rid of Windex and 409 and Mr.

Bubbles and Glade plugins to personal care products, shampoos and detergents and soaps. As much as you can eliminate things that you're putting on your skin, you are breathing in, your absorbing, eating, drinking.

Of course, trying to eat organic food as much as you can to lower the chemical exposure from what you're eating, drinking good, clean, filtered water.

You can control what's in and around your home. Once you walk out the front door, it's kind of out of your hands. So we go for as much of the low-hanging fruit around your home environment as possible.

And that's a lot you can do, and it's not something that has to be expensive. It just takes a little bit of mindfulness to

say, hey, when we do shopping, we're going to go to Costco and Target and Walmart and we are going buy organic food.

It used to be you had to go to Whole Foods and spend half your paycheck on a week's worth of groceries. But now the biggest retailers or organic foods are these big box stores like Target and Costco.

So you can find a lot of this food that's relatively inexpensive and it's certainly much healthier for you than the conventionally grown stuff. Making that decision to eat a little cleaner for the family is great.

Then again, you just start walking around the house and look at what you've been using to clean your home. What do you use around your yard? What you used for your pets?

Is there a better option out there that might be less toxic, less problematic? You just slowly start making those changes in and around the home. Again, it's just that kind of impact over time.

People say, well, gosh, this doesn't seem like it that much when there's so much other stuff in the world. And I was like, well, you kind of have to think of it like if I put a penny in my bank account every day, it doesn't seem like very much, but over time it accumulates and it grows and becomes something pretty big.

And it's kind the same thing when you're trying to reduce the body burden of different toxins. It's that little bit every that over times makes a difference.

And beyond that, I mean there's other things we can do to help kind of clear toxins out of our tissue. You know, there are different nutrients that help support detoxification.

There's a lot of herbs that do that. I'm a big fan of something like sauna therapy. Sauna is probably the most efficient way to get different toxins of tissue, colon hydrotherapy or sometimes coffee enemas can be very helpful for people.

So we've got a lot of opportunity to do things again that aren't super expensive, that can help promote better detoxification just to assist our body to get what it's naturally designed to.

Yeah, it's estimated, I believe the EPA has indicated that our indoor air quality is two to five times more toxic now than the outdoor. So when you said, you know, just when we leave the house is now entering the House, right?

There's certain plants obviously that help with detoxification air and to pull out some of these culprits, but it is ubiquitous. We, and I think the prudence now is to live intentionally.

Environmental toxicity and mold burden

or at least mindfully to try to avoid as best we can because while you can avoid everything, I believe it's estimated too that the level of carbon monoxide on an airplane, unbeknownst to us, is quite high.

When that was expressed, and I'm not sure if you were still there, how we met initially at the pediatric conference, I mean, I was shocked. Once you kind of peel back the surface, you realize we're living in a chemical soup.

Yet we are still able to live. It doesn't mean we were healthier. We're all toxic. The question I think is just to what degree and what ability are our portals open?

Are we sweating? are we moving? What's our nutrition like? Was our hydration like the kind water that we drinking? How are you recovering? All that's irrelevant.

And a lot of that, we can control and often enough free. So, um, You're right. Are you doing any sort of, any total toxin testing out of curiosity? You know, I used to, and I kind of stopped only because I realized everybody's toxic and, you know.

And ultimately I don't know that it changes treatment, knowing exactly what toxins are in you. In most cases, I don't know that's as significant because the kind of things we're going to do to help support detoxification may not matter.

So, you know, there's a whole tox profile through Mosaic and, people would come back with VOCs and petrochemicals and most people have different pesticides and herbicides.

Does it give you guidance on the best approach to treatment? Not really. So if we just kind of accept that we're all exposed, there are some people who are really good detoxifiers.

There's other people that are not. Again, I would argue that if you're living with a chronic illness, you are probably not a great detoxifier. That's probably why you were chronically sick.

promote better, open up your pathways a little bit better so that it's easier to eliminate these toxins. And to a certain degree, some of this is probably genetic.

We know that there's a lot of genes that are responsible for detoxification. Some people are slow metabolizers and some people were fast metabolizes. If you're not sure for yourself, coffee is always my litmus test.

People who can drink a pot of coffee and feel nothing at all. You're probably a pretty good metabolizer. If you drink a couple of sips of a coffee, that leaves you nervous and jittery and gives you anxiety.

You're probably not a great detoxifier. So, you know, understanding a little bit about yourself helps, but this kind of goes back to my first talk about the gut.

It's very hard to detoxify people who don't have a healthy gut since we do eliminate a lot of toxins through the stool. If you're constipated, if you are having motility issues, You've got to be really careful about doing any kind aggressive detox if your not eliminating well because that usually backfires and people feel much worse.

Yeah, it's you're absolutely like that. Fortunately, we begin to almost normalize the abnormal, like in terms of motility or passing stool. I mean, I hear all the time, probably likewise for you.

I'll go once every other couple of days. The degree of infrequency begins to rise and so too illness. Pediatricians tell some of my younger patients that once a week is normal.

I'm like, I don't know where you went to medical school that someone told you that was normal, that is absolutely not normal and I think if you look at the animal kingdom, you're looking like dogs, usually 20, 30 minutes after a dog eats it poops.

It's like they generally have better elimination than most humans. So again, if you eat three times a day, in theory, you should poop three time a days.

If your nervous system's working well, your gut's wanking well. That's what should happen. Now, that doesn't happen for most people, but I think once to twice a a healthy, well-formed bowel movements.

People don't have abdominal pain, cramping. You don' have to sit on the toilet for 30 minutes to have your bowel movement. that's a healthier sign of good elimination.

Are you testing it all for mold, mycotoxin? Absolutely. You know, it's become a pervasive problem. And a lot of people certainly dealing with Lyme disease and tick-borne illness and other chronic infections.

If you look at what mycotoxins can do to the body, they can become immune suppressants. They can directly damage your nervous system. That can damage our lungs.

These are toxic chemicals that are secreted by certain species of mold. related to water damage. You know, I live in Southern California and we find the construction here generally is terrible.

And so when it does rain here, everything leaks like a sieve. Then sometimes too, it's a construction problem. They put these houses up so quickly, inevitably some plumber just didn't get some fitting tight enough.

There's the drip behind the bathroom and the kitchen sink, the laundry room. So, you know, it's become one of these things where in most of my patients now, we're testing for mold, mycotoxins, right from the get-go, just to see, is this part of what's contributing to your body burden?

Is this is part what part your toxic load? Because again, gives us an idea, do we need to do something where you're living? Do you need remediate the mold in your house?

Do you need to move? How is it that we can help you deal with the mycotoxins? Because if that's an ongoing persistent exposure, it can really undermine your ability to get well.

And I've seen some people that until they get out of the moldy environment, they don't get. Well, in terms of testing, anything specific. So I don't do urine mycotoxin testing.

I found that it's heavily influenced by mycotoxins in food. And again, as clean as you eat, my catoxins are in the food, so I use a lab called My Mycolab out of Florida.

Dr. Andrew Campbell is the medical director and he is an MD toxicologist. He's published over 100 studies on the health effects of my cotoxines. And that particular lab looks at IgG and IgE antibodies against mycotoxins.

So the IgGs antibodies are relative to exposure, where the IGE tells us more about whether you're having true mast cell activation against the mycotoxin.

And so I like the ability to gauge what's your exposure like and how much is it actually impacting your immune system. I'll have to send you mine. Curious to hear your feedback.

So that's what we use as well. In terms of treatment now, do you have an order of operations? If you find certain ones higher than others or how, how do think about in terms treatment?

Obviously there's a lot there. Yeah, I know that there are other practitioners that really try and hone in. This is what you do for mycophenolic acid.

I don't really approach it that way because ultimately it's about getting all of them out. Again, sauna is my go-to. Sauna is the most efficient way that I've seen to eliminate mycotoxins and sauna gets rid of toxic metals like lead and mercury.

and chemicals like pesticides and herbicides. So you get rid of a lot of stuff by doing sauna as long as you're not heat intolerant and you can do it.

Detoxification, binders, and fiber

But I did talk with someone over at Relax Sauna and I know they were telling me with their specific sauna because they have an infrared frequency that's like right at the perfect level that resonates with human cells.

They're saying that even if you go in the sauna for five minutes, fully clothed, you don't even get to a point where you really sweat. It's enough that just starts mobilizing some of these mycotoxins out of tissue.

So that, even though you know, sweat it out, ultimately you'll eliminate it through your urine. Even something like that can be helpful. Again, there's a lot of nutrients.

There's lots of herbs that could help mobilize mycotoxin out a tissue, 90% of the treatment really is getting out the environment. So whether that means you get the mold remediated or you move to another environment.

I know Dr. Campbell talks about this all the time, that you don't necessarily have to get into heavy detox to microtoxins out your body. He kind of knows how to do that.

But you know, again, there's a lot of things like phosphatidylcholine, which is a healthy fat that makes up a of our cell membranes that can help get micotoxin out.

Phosphatidal serine, nitric oxide, magnesium, fish oil, vitamin D, all these can be helpful as ways to get mycotoxins out of tissue. So often we do have people on some of these supplements to just encourage better detox, but movement, sweat, those are still some the better ways Binders, obviously you hear that quite often.

Any specific use in your timing with binders? I don't use bindars at all, you know, for a couple of reasons. One, clinically, I've seen this over and over when people go on bindings, they get horribly constipated, gas bloating, and you get a lot of GI side effects from the bindors.

Number two, there's really hardly any research on any of the binders out there. So if you think about mycotoxins in particular, you know, most mycotoxin are eliminated through the kidneys.

Why taking a binder in the gut is going to help with something that's eliminated to the kidney's anyway doesn't make a lot of biological sense. And, I've heard other practitioners who I respect and I like Say, well, you know, when you take a binder, it stops what we call this enterohepatic recirculation.

Well, your liver already does that. You know when your lever binds up toxins, that conjugates it. This is part of our phase two detoxification. It binds it to glutathione, binds to methyl groups, and binds into sulfur groups.

That is your natural way to prevent reabsorption. So again, I think for someone who's chronically constipated, has motility issues, you have to be very careful with detox anyway.

That's where, at least in theory, that might happen. But if people are eliminating properly, the likelihood of getting that recirculation is pretty low.

I don't like the fact that there's really no research on these binders. It does tend to cause a lot of side effects and you know, fiber is your best natural binder anyway.

So I'd rather people just incorporate more high fiber foods into their diet versus taking bentonite clay and charcoal and zeolite and all these other things that again tend come with a lotta side-effects.

Fiber fuels, I think that's something we've been trying to underscore for the last decade with my focus in microbial medicine, obviously looking at your microbiome and the interplay of every single biological system of the body.

In terms of fibers, because I've seen some practitioners go all over spectrum. Cilium can be too harsh. Start here, stay there. Are you looking at sensitivities?

Obviously food is nature's medicine. When you're getting in fiber in particular, do you have a kind of a order of operations or is there a preference in terms fiber?

Well, I think a combination again of soluble and insoluble fiber is good. So you can get some of your insolubile fiber through other grain products. Obviously, not a fan of wheat, but if you're getting it through quinoa or buckwheat or these kind of things.

And then soluble fiber, you get through things like pectin, which is found in apples and pears and other vegetables. So again, it's really about a mix of both.

That insoluble fibers kind just scrapes the inside of the colon. Plus, all these fiber sources are fuel for your bacteria that live in your large intestine.

I mean, that is their fuel source to thrive. And so, you know, often when we do stool testing, we'll see people with low butyrate levels and butyrite is a big driver for the large intestine cells.

Well, fiber is what helps fuel those bacteria to make the butylate. So, the average American, I think it's five grams of fiber and even the RDA is 25 grams.

Most Americans are fiber deficient. And again, it's just mindfulness. And when you plan your meals, that you're incorporating good sources of fiber, which is, you know, fruits and vegetables, nuts, seeds, legumes as part of your diet.

See, what I find often enough, especially with mold, many individuals become carbohydrate intolerant. So a lot of the fiber they'll have these kinds of aggressive symptoms.

How do you overcome that? Well, I don't know that that's been my experience. I mean, just see people with carbohydrate intolerance. But then again, it's like, okay, what is it about their GI tract that not tolerating carbohydrate well?

And is it specific carbohydrates or is all carbohydrates? Because there are various types of carbohydrates and I do find there's some people that it's very specific types carbohydrates.

It's not carbohydrates across the board. So, I mean, it is kind of a very generic answer. I might start looking at various specific type of food sensitivities.

Is it really a food sensitivity? is that you have certain type of brushboard or enzyme deficiencies where if that's the case, usually a good digestive enzyme for a while or other things to promote better digestion can help increase those enzyme levels so that they're breaking carbohydrate down.

I mean, I'm a big fan of stool testing just because I like to look and see, you know, are you making enough of the right enzymes to break down your protein carbohydrate fat?

I've found that, without just guessing all the time and throwing a bunch of supplements at people. Let's get the data. You know, test, not guess. And that's proved to be a little bit better.

Sometimes people are surprised and I'm surprised. They've been taking digestive enzymes for a long time, they're convinced that they have some sort of enzyme deficiency and we test them and don't see any evidence of that.

Gut health and stool testing

So again, there can be lot of reasons why people have digestive issues, but That's kind of our job, right, is we've got to help people figure out is it coming from the top?

Is it something in the middle? Something further down the GI track? Where is that deficit that we need to overcome? But good stool testing can be helpful.

Any particular stool test? I only use doctor's data. There unfortunately are some really bad players in the stool testing department without mentioning names.

I'll say anyone who claims they have a proprietary technology that nobody else uses, they're probably not a very reliable lab. And I know there's one particular lab that a lot of functional medicine doctors are using that actually had a study done to find they were incredibly unreliable.

Unfortunately, I knew a lotta doctors use that. You know, I was a clinical microbiologist before I as a doctor. My undergraduate microbiology professor, his doctor's date as medical director or was his medical doctor, he passed away during the pandemic.

But I know that they run a very tight ship. They do the testing the way it's supposed to. There a CAP certified lab. That's the College of American Pathologists that actually sends blinds quarterly so you can validate your technology.

labs that that don't participate in CAP or a similar type of proficiency program, I'd be very wary of, you know, the labs to do their own proprietary technology, inevitably don t participate this because they know that their technology is not reliable.

And yeah, be wary o those labs. Well said. In terms of co-infections, obviously when we were looking at Lyme, anything viral related, I mean, EBV, HSV cytomegalovirus, are you ever going after any of these individually or again, and you're just working on the terrain and then those, they kind of become dormant?

Yeah, you know, I think the herpes viruses as a whole have really become a red herring. And I know there's some people who really get hung up on Epstein-Barr and Herpes 6 and CMV and all these.

I'm of the opinion, and again, as the former microbiologist, that these are normal viruses, As are most viruses. Viruses generally are not here to harm us.

Viruses are not living things like bacteria and parasites and fungi. They are packets of protein that can be expressed when the terrain is altered. So when there is a reactivation of Epstein-Barr, when is there a herpes outbreak, that is the sign that something in the terrine is off.

And this idea that we're going after, you know, kill the virus, in most cases you'll find it doesn't work clinically. I mean, I see people go on different types of antivirals, whether it's prescription or herbal.

Sometimes they're okay. Sometimes, they are not great. We know with Epstein-Barr, Epsteine-bar does not respond to antiviral medication. Some herbs are okay, but again, ultimately, it's about what's allowed that virus to become active.

Is it your stress level? Is what you're eating? Other toxic exposure? Again, what is it that's allowing that the virus becomes active? At the end of the day, we're really evaluating the total terrain.

Immunotherapy, where are you starting in terms of, I believe what you presented at the conference was very enlightening to me. Let's maybe segue there in term of allergy testing, and various immunotherapy that you're integrating within your practice.

Yeah, I think I look at most of my patients at some point along the course of their illness, whatever it is, something has changed in their immune system.

They become hypersensitive to their world. they start developing food sensitivities, mold allergy, pollen allergy chemical sensitivity. I see this a lot after Lyme.

People like I've never reacted anything after I got Lyne disease. Now I can't eat certain foods and I get into a moldy environment. chemicals, you know, perfumes and strong scented things bother me.

So even if we're effective at getting rid of the infection, we are still left with the immune mess. This is where immunotherapy can help reset the system, build your immune tolerance again, so that you can get to a point where these things don't bother you anymore.

And at the end of A lot of these triggers set off your mast cells and it becomes a mast cell activation problem. And since mastcells are found all throughout your body, depending on what part of the mastcels get activated, it could be skin problems, gut problems.

It could lung problems or brain problems Allergens are a driver of mast-cell activation. Allergen, pathogen, toxin. Those are the three big drivers. So, immunotherapy is probably the most efficient, effective way I've found to,

again, reset the immune system.

So we test people for food sensitivities, mold, pollen, chemicals, and really the history gives us a lot of clues to where we need to go with people. If people know that, yeah, every time I eat certain foods, I get gas and bloating and an upset stomach and heartburn, or I got a headache, and I feel tired.

Okay, we know there's a food issue. Or every again, it rains. Every time it's humid outside. I've got head pressure, tightness in my lungs. Maybe it is a mold issue?

So the history alone gives us a lot of clues on what we need to look for. And then we do the testing and once we know kind of what they're dealing with, we've got different types of immune therapy that can be effective.

So we did what's called sublingual immunotherapy. Sublingal means under the tongue. This is where we mix up in our office. If we identify that you're allergic to ragweed or dust or Aspergillus, you know, we put in a bottle and you put these drops under your tongue.

So the concepts a little bit like allergy shots, if you were to go to an allergist, were giving you the thing that you're allergic or sensitive to, but at a very specific concentration, it builds your immune tolerance.

And then we keep increasing the dose over time until you get to a point where it doesn't bother you anymore. We also do something called LDA or Low Dose Allergy Therapy.

Lda is actually made by a pharmacy so everybody who gets LDa gets the same mix and there are different mixes. There's a food mix that has about 70 different foods in it.

there's an inhalant mix it has mold and pollen and cat and dust and dog and feather and other things you breathe in and then there is a very small chemical mix.

And with LDA, people get that every seven weeks. We also administer it under the tongue. But the idea behind it's the same is that we're trying to build immune resilience.

And then we also do something called LDI, low dose immunotherapy. This is to help mitigate any kind of immune reaction from a microbe.

Herpes viruses and immune imbalance

So whether it is Candida, strep, Lyme, Mycoplasma, if we believe that that's part of what's driving your symptoms. For someone who might have Lyne disease, They've been on antimicrobial therapy with antibiotics or herbs, they've gone on for a while, and they're still having symptoms.

Well, maybe it's not just about the infection anymore. Maybe it is that autoimmune effect that it has triggered. So this is where LDI can be a way to turn that Autoimmune reaction off.

An LDI basically is dead organism. We dilute it out really into homeopathic dilutions. we mix it with an enzyme called beta-glucuronidase, which is found in your white blood cells.

And we're going to put it under the tongue. Again, sometimes it's a game changer for people. They've been on various treatments for their infection. they're still having symptoms.

If we get the right antigen at the correct dose, I've seen it sometimes within 24-48 hours completely turn off people's symptoms and they start to feel better.

So often we're mixing and matching different types of immune therapy. Obviously, every patient's a little bit different. What do they need? What will they tolerate?

You know, what fits their budget? But the idea behind all this immunotherapy is a way to get the immune system back online, get it back into balance, because it's typically this overexpression of what we call TH2 or T helper two cells that drive allergy and autoimmunity.

So if you think about TH1 and TH2 being a seesaw, TH 1 cells are your direct scavengers of infection. TH 2 does more antibody production. So we're trying to get it back in balance and all these forms of immunotherapy can be effective at doing that.

Anything also that's obviously very prevalent within some of these chronically ill patients is TH2 dominance, TH17 representation. Anything that you find clinically works very well to kind of make that shift.

Well, I mean, getting those back in balance, there's research. Glutathione actually is one of the better ways to help rebalance TH2-TH1 dominance. And again, a lot of people are probably relatively glutathion deficient.

Resveratrol has actually been shown to helped modulate the immune system. There's something called pycnogenol, which is a pine bark extract, has been showing to reset the system I find they don't work nearly as well as immunotherapy, but these are other things that we'll add in to help, again, rebalance the immune system for someone who we believe or test for.

Cyrix Lab now has a test where you can measure your TH1, TH2, and TH17 cells. So we can now directly see if there's that kind of imbalance. Again, if you're a data-driven person, it's a great test.

Tests don't guess, I guess. But yeah, in terms of patterns, obviously, um, sometimes things become evident very quickly, especially with some of these immunocompromised patients.

Um, when you said mast cell too, just out of curiosity, how often are you integrating something like chromolin or ketotipin? All the time. I mean, I realize it's not the cure.

It is a band-aid, but to get people comfortable while we're waiting for all these other things to fall in place, knowing that immunotherapy could take months to really get the full clinical effect, using, you know, chromaline sodium as a mucous membrane, mast cell inhibitor can be very effective.

Ketotypen is better systemic mast-cell inhibitors. We have a lot of great natural mast cells inhibiters, things like quercetin, things like luteolin, things P. E. A.

I use a lot of lutaolin. Again, some people do really well with that, particularly if they don't tolerate any of the prescription mast cell inhibitors.

But trying to get that piece under control while we're waiting can sometimes really give a good symptomatic relief. Similarly, we'll use a lot of quercetin.

And again, nature's medicine, obviously getting it through food better. So we will provide education with our patients and discussing what that looks like, what healthy eating should be.

A lot these herbs and spices that you can actually even consume. While there can be extractions between tincture can beneficial just from food alone and as we discussed fiber, there's so much we can do that's often overlooked is we become so disconnected with our evolutionary biology.

Immunotherapy and mast cell support

We're eating things in a package or in plastic bag on the rush and devoid of micronutrients. And we're wondering why eventually we are getting sick. It's, we were ticking wine bomb and our environment is not helping us.

I think it's the American way. Yeah, we eat processed food, packaged food fast food. We eat on the run. we don't actually sit down and enjoy a meal. I mean, I've spent a fair amount of time in Europe and I'm always impressed

that most Europeans know lunch is two hours, three hours.

You go home, you meet with your family, kids come home from school, You have a a mealtogether. It's community, it is family and you have time to relax and Enjoy the meal How many people at work they eat at their desk?

They get 15 minutes to slam down their meal before they have to get back to work. It's not relaxing at all. Digestion, peristalsis is a parasympathetic episode.

You need to be in a relaxed state to do all that. And again, I'd say most of my patients again are probably more on the constipated side, just for that reason is that they're not eating regularly.

They're eating on-the-run, they are always in fight or flight. they just don't get a chance to decompress and relax. And again, that's what our nervous system needs to digest well.

How often do you hear parents, you know, we got to go, hurry up, finish up your eating, right? We're just shoving food to get into activity. Whereas as you said, our European counterparts, which is in many other cultures where you kind of sit, unwind.

and you're able to secrete your digestive enzymes. You said it's very much dependent on a parasympathetic shift. The vagus nerve, which originates in the dorsal motor nucleus, it innovates every step of the digestive process.

we're wondering we'll do a lot of stool testing and often enough we will see you know undigested food come up every single time nearly yes these patients struggling but often of there is this nervous system imbalance that we see above all else is that something you because that's our kind of step one we can only heal at the speed of our nervous.

Are you offering any sort of nutraceuticals or treatment in terms of, obviously, yes, walking outside in nature, meditation, diaphragmatic breathing, grounding.

Are you doing anything else in order to perhaps make that shift into kind of this less cortisol dysregulated state? Yeah, I mean, there's a lot of things out there to help kind of get you back in that balance.

They, of course, obviously movement, being out in nature, grounding, all that can be helpful. But I got some people that I like Vegas nerve stimulators.

For some, people it's devices that help stimulate the Vegas Nerve to kind force you, if you want to think of it that way, into getting into a more relaxed state.

I have a lot of people to do limbic system retraining because they've had various traumas and things that keep them in that sympathetic overdrive. So I like Primal Trust with Kathleen King.

Annie Hopper's got a program called DNRS, Dynamic Neural Retraining System, and there's a couple of others out there. But some people do really, really well with these programs because again, you need to retrain your brain not to be so overstimulated, particularly when stressful things come up in life.

I mean, life is stress. There's always gonna be things that happen. And again your resilience to that can make a difference. So if you can retrained your not be overwhelmed when you get bad news or something stressful happens, that could be an incredibly powerful tool.

And again, for some people getting out of nature as much as we'd like that, they don't have that opportunity for whatever reasons. So if this is something you can do at home for yourself, and it's doable, I think it still beneficial.

Again, these can all be parts of the total treatment regimen to get your parasympathetic nerve, get you Vegas nerve operating the way we want. The, uh, that's one that we'll always suggest too.

I mean, um, DNRIs obviously primal trust we love as well. It's interesting because I didn't recognize this, until I kind of saw this pattern often is we can remove the, the burden, toxic burden the infection, Um, The allergen, if you will, yet sometimes people will still have this hypersensitivity, this hyper reactive state.

it's almost like the body has now. adopted this environment as a threat, right? So perhaps you're eating a more healthy diet, the food sensitivities are gone, but maybe it's something in the environment.

Actually, when you are seated in that area for whatever reason, you entering that room and then the trigger begins. So there's so much, I think, behind the scenes that can go into that.

Just even in terms of digestion, if you look at the cephalic phase, when you're kind of thinking about food or smelling food, or the sight of food and how that activates the vagus nerve to narrow organs for digestion.

We are so removed for that. We're not cooking our food, right? We were looking for the quick fix, food in a box. Convenience culture, I think is really what has made us ill.

I mean, it's to our detriment. And while it has allowed us to become more efficient, certainly not to the benefit of our health all the time. So you're absolutely right.

Where should we go next? You are an absolute wealth of knowledge.

Lifestyle takeaways and closing remarks

I know we're definitely approaching time here, so I would love to probably do a round two in the future, but any kind of big takeaways for our listeners in terms of maybe like three simple things that they can start today to make a change or just any big take aways to surmise the conversation today?

Well, I think, you know, again, Start simple, start slow, make it easy on yourself, don't be hard on your self. Again, I think three things I would think of right off the top of my head.

Start eating real food. The more you can get away from processed food, junk food the less hands that touch your food better. that, again, doesn't have to be difficult or expensive.

Number two is, you know, start looking around your home, cleaning up different toxic things that might be adding to your total body burden. Again, not difficult, Not expensive, and, try and get in the habit of doing something for yourself every day for you.

I think your mental well-being is so critically important. And again, particularly if you've been dealing with a chronic illness, it's really easy to get caught in all the things that go along with being chronically ill that you forget to experience joy in life.

Find that thing that makes you happy, even if it is just for a handful of minutes. Watch a funny movie. Take a walk with someone you love. Go spend time with your pet.

Whatever it is for you that brings joy to your life, because at the end of the day, that's really what it's about. We need to get out of our heads sometimes and just enjoy being on this planet.

I think that is a good place to start and all these other things you can start filling in as time goes on. When you walk into our clinic, it says right on, as you walked in, attitude of gratitude.

And while I know that some of the sickest among us it's difficult, certainly hope is real. If we can find things to be grateful for, there is light at the end of tunnel.

Sometimes we just have to find that path, partner with the right practitioner or even a lot of our patients are becoming more well-informed as tech and AI evolve very quickly.

The good part is that all of us are learning collectively and so we're on a mission to help each other. This has been absolutely incredible. We just scratched the surface, I have so many questions, but I want to be mindful of your time.

I encourage everyone to definitely pick up your book, The Lime Solution. Where else can people find you? Visit you, learn more. Yeah, best place, just visit my website.

It's just Darren Ingalls, ND, and it's a NancyD.com and all of my information's there. Thank you again so much for sharing your wisdom, your experience.

Last question we end every episode with. If you could have one superpower, Darren, what would it be? Oh gosh, that's a great question. You know, if I had a super power, it'd be to heal myself.

Heal myself faster. If I have the, uh, the power. I mean, I think we all have to power to heel. We have an ability to heel ourselves and heel each other.

if could hone that to be more efficient, That would be awesome. Too often is it's, we put everyone. in front of ourselves, right? I think when we have kids and families and we hear it all the time, especially since we see kids.

And, you know, parents will really prioritize their children, and rightfully so, but often to the expense of their own health, or shortchange the expensive their health.

While that's a common theme, I mean, putting your oxygen mask first is critical. I saw that I was presenting in a conference and one of my quotes that resonated with people is, When you're selfless, you lose your sense of self.

And I saw that within my parents growing up with my brother and I as former athletes. They did everything to put our kind of careers, if you were ahead of theirs, to their detriment.

I mean, it certainly is a blessing and again, attitude of gratitude. The premise remains is we all have to make ourselves a priority. And it's not something that's necessarily narcissistic, but we need to be mindful.

So you had the principles that you suggested. We always say here, you got to eat right, sleep right. Move right talk right poop right? That's my foundation thought.

You do that, You're going to feel right so. Darren, you are incredible. Again, appreciate your time. I would love to do a round two in person. Maybe even do some out at your practice on the West Coast because you've got some better weather than we do here in Chicago.

That we don't. Nonetheless, we will definitely be in touch and I look forward to speaking in soon for everyone else. Hope you guys enjoy this. Please like and subscribe, leave a review, pass it to a friend, anyone who has a chronic illness, who needs any assistance, we are glad to help.

Obviously, Darren's book and his practice as well. Until next time, stay healthy, and stay wealthy, my friends. Thank you for tuning in to the TBD Fit Podcast on Dr.

Talks, where we unpack all things health and longevity. If you enjoy the show, like, review, and subscribe. This allows us to have a greater reach and help others on their health & wellness journey.