Introduction to Jocelyn Strand and acute Lyme prevention

Everyone. Dr. Tom Moorcroft, back here with you for this episode of The Healing from Lyme Disease Summit. And we're in for a really great chat right now.

We're talking with Jocelyn Strand, naturopathy physician who's the director of clinical education, a bio site, and and one of the things is I love working with people who are like minded and who's who are dedicated to, you know, helping people see the possibilities of healing.

And so rather than read through all the different amazing things she's done, I know she has this amazing story about how she came to do the work she's going right now doing right now and why it's so inspirational and why we have to talk about it today.

And as an added bonus, we're going to be talking about using botanicals in acute tick borne illness. And I just think that this is such, you know, Jocelyn, such a great topic for us because most of what we've been focusing on is treatment of chronic Lyme disease.

And, you know, one of the things that we the one of the best treatments for chronic Lyme disease is to actually prevent it from becoming chronic in the first place.

So I'm so glad you're here to talk about this. Thanks. I'm so excited to be here and super excited to talk with you. Of course. That's why we always have a great a great time.

What? So. So what got you into this and how and where did you go? How did you get from, like, private practice and helping one on one to more of this bigger, you know, working with bio side and then getting the word out on the benefits.

Well, you know, as a practitioner that there are certain moments in your practice that are pivotal. Right? It's like, well, something something big just happened.

Right. And so one one of those moments for me was working with a pediatric patient that I found out in retrospect, had chronic Lyme, had had mold exposure, was very, very sensitive and super allergic.

So type one allergic hypersensitivity to almost all food. She was eating like five or six foods when we met. And I was terrified to treat her because she was having her.

Her allergic response was an acute respiratory response and it was silent. And so her mom would walk in the room and she'd be like blue on the floor. And in a asthmatic response that was not her mom just expected her.

She didn't not think she was going to live to kindergarten at that time. She was sleeping next to her bed on the floor. And so I thought, oh, my God, whatever I prescribe, this patient is going to have an allergic reaction to it.

So I did go more a little bit more conservative at that point in terms of like ordering lots of testing and things so that I didn't prescribe anything that wasn't really well directed for this child.

And she came back with some pretty awesome dysbiosis. She had candidiasis. So Candida over east overgrowth and she had low bifida was low and a few other bacterial species that were out of balance.

And I had never worked with pediatric dysbiosis at that point. And so I called Geno. It was their CDC that I had used. And I said, Hey, what do you do for you have a recommendation?

And and she said, Have you ever heard of bio site in? And I said, no. And she's so we've talked about it. I think this was I can always remember to watch because that was when I was pregnant.

So it was 20, 2012. So ten years ago now and I, I ordered the bio side. I started at one drop twice a day and she didn't have it. She was having that weekly or biweekly she was having or twice a week she was having this respiratory response.

And I saw her three weeks later and she hadn't had a single event and her mom still credited with saving her life, which I know that's not a claim by bioscience, but it was her mom's experience.

It was that it turned her around immediately and she looked really different and she interacted very differently. And it was like it was that moment in practice where I was like, Whoa, something profound just happened with this child.

A pivotal pediatric case and discovering Biocidin

And it was working with the microbiome, it was working with wine, it was working with mold, toxins, and so and working with botanicals, of course. And so then of course, I tried to get myself and I tried it on my family and my animals, everybody.

And then I moved. I really migrated into using it as a regular part of my practice. And then there was on a formula came out. And so I live in northern Minnesota.

We are one of the highest areas endemic for tick borne illness. So we have a ton of them. I have we have so many ticks every year on our two dogs and cats, no matter what we put on them or anything like that.

All we all end up with something, you know, with an exposure of some kind. And that's my patient population, too. And so I am, of course. And that traffic doctor in Minnesota, I have no prescriptive rights and so I needed a tool that I had in my medicine cabinet that didn't require me to go and justify some immediate therapy for a tick, tick bite.

And I found that in for myself and my patient practice and in the liposomal biocides. And so we did have research on it and that's why I started using it.

But it's also just watching it, watching it in my practice and the effect that it had with my my own children, my animals, myself and my patient population.

It was a really remarkable experience. And when that's when I started experiencing that, I thought, I have this other doctors have to know about this.

This has to be in everyone's tool kit. And that's became my sort of my passion or what got me here. And what keeps me moving forward is to watch this continually happen for patients.

And and you'll see some of that clearly. It's interesting, too, because you bring up like northern Minnesota and you're I think about like the map that we all drew or draw and or have in our minds that we're being spoon fed so often.

It's like, well, 95% of the cases of Lyme and other tick borne illnesses that are in the, you know, the Northeast, which kind of used to be something.

But now we're realizing that it's spreading and it's different. So I do I mean, I agree so much that you you need to have a tool. And the problem is, is not enough.

Doctors are even open to this. And a lot of them, they got the rash after a tick bite and then they have joint pain and fatigue and brain fog. And we talked about our in our testing module with like our interview with doctor boards.

They're even they're getting they have every diagnostic criteria and then it's like negative a screening test which

misses half or more of them, and then they stop treating them.

So we don't have enough doctors, we don't have enough prescribers, but we have some other options to work with people. So I mean, I'm just appreciate that you bring up before we even dove into what we're doing and how we're doing. But the fact that the prevalence is much it's much more common and it's been reported all over the you know, in all the contiguous 48, we've seen it a little bit in Alaska.

I don't know if there's one in Hawaii at this point or not yet, but it's probably brought in if it were. But I mean, everywhere has some and it's growing.

So we need to get this in the hands of people. There's just not enough. Doctor patient was a three year old girl and we have to we have to guess that it was trans placental transmission for her, that she'd had it because she'd never.

Well, I mean, you know as well as I do that sometimes you don't see the tick at all because they're so tiny or, you know, they don't necessarily leave leave the bull's eye right lesion.

Right. But but principal dental is is a thing. Right. And this little girl, I accidentally hit the nail on the head with botanicals for her. It was it was. Well, I don't think it was an accident.

I'll say it that way. I didn't know it was going to have the effect it did. But I feel like it was you know, it set me on the path that I want to be honest, what it feels like to me.

It was such a dramatic response from her. Right. So, I mean, I think one of the thing that's so important is thinking about this prevention piece from your perspective and the training that you've had in your experience, how does the conventional world really look at tick bite and how might you as a natural pathway as different and you know, some states natural paths can prescribe, some they can't.

You're at a place where you can't. What are the options for somebody who may not be able to prescribe or maybe a parent? Is there something safe out there that they can utilize that, you know, obviously, it's always better to go to a provider and have them evaluate you and stuff.

But when you're providing, you go in and your provider isn't offering you a preventive treatment. I mean, is it okay to I mean, are there safe preventive measures we could take?

Yeah, it's it's a great question. And I want to I want to preface this with a really strong statement that I'm not making any claims on behalf of biocides.

I am a practitioner first, so I'm going to share some of what I saw in my practice, and then there'll be some data as well. But if you hear me talking about the effect that outside in a clinical way, that's my clinical experience, not a claim.

So right now that I'm just like. Everyone else talking here, it's like, yeah. And I mean, it's, it's so important, Jonathan, that we this is, you know, people talk about the end of one in the case.

Studies in the case here is we need this information so that we can go to the next part. And even you and I have talked, it's it's so hard to get to the point where you're actually allowed to do this work or you can get someone to do it.

But people are getting sick and we need to give them safe alternatives to. Well, you know what? I think, you know, to not doing anything. Right, right, right.

So, yeah, we have a disclaimer everywhere. This is all for informational purposes only. But yeah, informational purposes only. I like that. Okay, so here's that.

Here's the gist of it. I'm like I say about 15 things I'd like to say back based on the questions that you've asked me.

But one interesting thing is that we we were working on an acute Lyme study.

We can't we can't really do it because of recruitment, because the standard of care demands, docs, recycling. And so this is that this it just illustrates the sort of the political piece of this which could be potentially preventing people from receiving the best possible care.

So I'll just throw that out there because it's such a powerful botanicals. This is such a powerful place for botanicals. So the research that we have, what it showed there, a couple of things that are really important.

First, it showed 97% cell death in 10 minutes. So that was whether it was a skyrocket. So that's, you know, the transmissible form, whether it's around body form or whether it's in a biofilm.

Using botanicals for acute tick-borne illness

All of those it had 97% cell death in 10 minutes in vitro. This is published in 3018. And I really have seen that. And I can show you a case of that if you'd like to see it.

Maybe we can save it for the end. But I'd like to show you what I saw happen overnight for my dog when we used the Liposomal biocides and for her. But so that's one thing.

The other thing is that it breaks up biofilms in this research. It breaks up biofilms. It also disables something called the Efflux pump. So the Efflux pump is what a of either bacteria or yeast and even human cells have an even less pump.

And we usually use it to pump out something that is dangerous. And so it is a mechanism for antibiotic resistance is if an antibiotic comes in, we know that some earlier will become the round body form and that can be a process yourself. Right.

It also can become antibiotic resistance through one mechanism is the biofilm and the another mechanism is the efflux pump. So the bio side and stopped all of that.

And the reason I'm setting the stage with that is so that you can understand why I felt comfortable leaning into this as an acute therapeutic. So once I learned about this and I learned about the research well before it was published, it just takes time for stuff to get published.

So maybe 2015 or so, whenever we came out with the like was all bioscience, I started using it and what I what I saw was an immediate transformation in in symptom picture for people when they are using it.

And it was almost a couple of things I think was really interesting is that because it's broad spectrum, so we see it work. You know, I'm intentionally directing it at Borrelia or Anaplasmosis or whatever it is, right?

But it's broad spectrum. And so it's also working with Candida and mold. And so if you are working with someone who has a tick bite and they feel pretty okay and you hit them with a high dose of Lassa, they may not feel okay right after they do that.

Right, because it has this broad spectrum killing activity. So it's important to know sort of that order of events. So using a binder like activated charcoal, zeolite and other other binding agents along with it.

So you dose one and then you would dose the next one. And what I saw was and I'm all I'm still setting the stage. I know I'm talking about products, but I'm setting the stage for what I saw happen.

Right. Which is yeah, one one patient was an acute 18 year old male and he had a tick embedded in his upper arm and his his wrist and his hand started hurting and he's like, why does my wrist and hand hurt?

And then he found the tick in his upper arm. And so he already had symptoms. We put him on the NSF max dose

for pumps and he got a fever from the onset because he had this massive die off.

He had a sweet tooth. He had all of the things. Right. His his microbiome was out of balance in other ways as well. And then he took the GI toxins, fever went away.

So that was it was like this, you know. So for him it and he's go ahead. You have I. Was going to say the GI detox, which is a combination binder, you know, it binding up those toxins.

Yeah. Exactly. So broad spectrum binder. A lot of doctor fresco who is the founder of Bioscience and the Formulator of Bioscience, a lot. Most of her products are a formula.

I think they all are formula, which is broader acting, and it tends to be gentler and more well tolerated for that reason, too, rather than like, say, just straight oregano, oil or, you know, straight, single, straight, high goes straight herbs.

I know that there are other ways to do herbs. And I don't mean to I don't mean to say anything bad about that. But what I will say the benefits of something like bioscience is that it's very, very gentle and well-tolerated for most people.

I think I went round oh so the typical typical response. By. In the conventional, if you get a tick by you can go to your doctor and if you have a take, they'll either say if it's someone forward thinking, they may say Take doxycycline if it's not.

And that would be is that if you're 50 milligrams twice a day for a month, is the typical dosing, is that right. Well yeah. And I do a quick ad and like that, I mean the typical from the regular people is if anything is, is 200 milligrams once which just is the studies of that have been shown to be very flawed and we often lead to now blood test or serum negative Lyme.

And then the other part would be if you saw some progressive. Yeah. Like 3 to 4 weeks, maybe six weeks of doxycycline 100 twice a day. I do know people do 200 twice a day, but typically for treatment because it's not prophylaxis because so crazy in your gut.

Gotcha. Okay. Okay, so, so if you if you go and if you get treatment, it's a it's an antibiotic. And they often often you won't get a prescription unless you have the bullseye lesion, which is is that 30% or 40% of people that.

Oh my God. Right. It's like 40 to 60% in the literature. So we call it 50. The CDC says 70 some percent. And clinically it's 15 or 20% maybe. You know. Okay.

So that what that means is that most people who are getting bitten and have a transmission of earlier are having an any expression of the erythema migrans, which is that rash, right.

Yeah. So that's really important to know because botanicals offer a solution that won't cause harm whether you got the transmission from tick or not. And that's where I get really excited.

Is that. Yes, you you. The only downside is the Turkheimer reaction that I just described. Right, which is that you may you may feel uncomfortable for a short time with people that are acutely ill with infections of any kind.

I don't tend to worry about the summer because to me, the the benefits of getting on top of the infection outweigh the just the temporary discomfort. Right.

And so I, I end up prescribing it immediately at high dose with the LSAT in, in that sort of case. And so that's what I would typically see. And then I would just try to give them comfort with you can do stamina, but you know, and sweating and movement and stretching and maybe some other anti-inflammatory herbs.

But I would I would just stay the course and take the binder afterwards. And and that's typically how I worked with a

few patients and yeah, I guess that's, that's, that would be the start of it.

And it can be used alongside, I mean, again, not a claim but that it would be useful to think about the combination therapy of the antibiotic with the bio side and because of the disabling of the efflux pump and the breakdown of the biofilms and I'd love to hear your take on that, because you're the prescribing doctor if you're not me.

What's funny is, like this study immediately comes to mind is the whole ceftriaxone synergy with ISI is safe and stuff. And I use these things a lot because the problem is that efflux pump is these bugs are so smart they've been around for I mean, Borelli has been around for at least 13 million years, way more than people rickettsia infections like in a plasma or Alicea, which I know we're going to touch on.

The distant cousins of theirs have been found to be 100 million years old, so they know how to live in these Efflux pumps are things that we're doctors and nurses are dealing with all the time in hospitals and clinics.

We don't have a good tool. And then you see at least in vitro in the laboratory, we can find that not only do it the efflux pump stuff but synergy with ceftriaxone.

So I've seen clinically a lot of our cephalosporin drugs it seems like a synergy with and we use it with so many different things. And so when you have people where you want to give them more antibiotic but you don't want to give them more antibiotic or you know, meaning like you think they need more but you don't necessarily want to give them more and beat up their gut and all these other things.

A lot of times it's the combination of the medication and the herbal, and especially when we're using for any of the providers out there are cell wall agents because the reaction is, you know, a cephalosporin, which is a single agent.

That combination seems and it's for me, it seems to be across the board with the cell wall agents, very synergistic, use it in mold, use it in Bartonella, use it and other things for other reasons.

I mean, but this particular point you brought up, I just think it the synergy is critical because and then the other thing is in your study like that, you can use lower doses.

So maybe one eighth the killing dose subtract. So it took one eighth. The amount of subtract don't have the same effect. So I'm thinking like just to share with folks so that from a prescribing from a medication prescriber perspective, if I want to give you Stephanie.

Right, usually 300 milligrams twice a day or Steph, your oxy and 500 milligrams twice a day. Very similar, especially Stephanie or almost the same thing in an oral form as ceftriaxone.

A lot of times people say, well, I want to go up and double it. Well, maybe your patient probably can't handle that, but they would need you think they need that higher dose.

So then I can do Stephanie in my bio sign in and I'm seeing that I'm getting like 600 or more milligrams twice a day worth of it of a fact without giving them that much medication.

And I really like that part and I've always been a combiner, but when I have data that shows synergy that I can show to another doctor, then they then then I can start to not only help the people who are listening to our chat tonight, but I can also help them, help others, you know, and spread the word.

Because there's actually, for me, the thing that always has been so nice about working with you guys in bio sign is like there's science and when there's not science, you're trying to figure out.

And so that's what we're talking about. So what do you what would you do for tick bites? Because I want to make sure that we we because I mean, I think the the case studies that you have are incredible.

And I want to make sure that we can talk about them. But just in general or maybe if you think it's more important to

dove into one of these cases, that highlights it, too, because, I mean, I love stories.

Well, yeah, I think it's true. And the thing is that the case studies are why it's what molded the way that I see and work with Lyme acute Lyme patients.

Right. And so maybe we could start there. I could share my share my story one one of the stories. So this is this is Dorothy. Let's see. I'm going to share my screen.

Case study: Dorothyu2019s rapid recovery after a tick bite

This is Dorothy and Cybill. Cybill is my Siberian forest cat. This tick right here came off of the cat, the cat's eyelid. So that, my goodness, have such thick fur that that the ticks go to their eyelids and their ears.

So I'd find this tiny little tick. That's my well-manicured fingernails right there looking pretty good. Anyway, so this this is not the take that was on Dorothy, but she had one this size, and it was attached to her chest right in this area.

She's got very thin hair as a labradoodle, and so they can get on her pretty easily anyway. So this just illustrates the tiny tick that you were talking about earlier or that we were talking about earlier so they can be teeny.

Well, that was in June. And I gave Dorothy, you know, I fell off the wagon and I didn't give her the care that she needed after a tick bite. And so this is what we basically what was happening is I was like this recording a webinar and she was snoring so loudly under my desk that I had to stop webinar and get up and to take her out.

And she she had made a mess. She had gone up, peed herself on the floor and she couldn't get up very easily. And then I walked with her and she was like kind of swaying back and forth.

And then she fell down the steps, going outside. And so I lifted her in the car and we went immediately to the vet and she had this diagnosis borreliosis acute excuse me, borreliosis and anaplasmosis so anaplasmosis as you probably already talked about, but just for a quick review, is that it infects the bone marrow and it does prevent the growth of the blood cells.

And so you can see that across the board here or suppress the growth of the bone, the the the bone marrow. So you can see hemoglobin hematocrit reticular sites.

Some of these are normal but very low normal and some of them are outside the normal range. So reticular site at 22, lymphocytes at 11.2 and platelets at 41.

I'm not sure I would have had the courage to do what I did if I'd known her platelets were here because I had a lot of risk here. That's thinking, Wow.

Yeah. It's like bleed to death. We have another dog and they wrestle and you know what I mean? It was probably risky what I did, but I didn't know it in my defense.

I didn't know that her platelets were quite so low. All I knew is that she had borreliosis and. And plasma doses. And I said to the vet, I just need a few days.

She prescribed doxy for Dorothy and I said, I just need a few days. And, and so I took Dorothy home and I gave her a pretty high dose. I think I was doing like, you know, in a human adult, though, she's £85.

So I think I did four pumps four times a day for her. But you can see this is four days later now. I know three, 20, 21. So we went back and her hemoglobin had come up into the normal range Medicare part way up this is what what gives me chills about this or makes me so overwhelmingly happy is the illustration of how the body can heal itself if we get out of the way.

Right. And how if we if we just identify the underlying cause and work with the body, that this is what's possible. Right. And I mean, it's a dog, not a human, but it's just an illustration.

But look at platelets where at 142. Pretty remarkable, I think. No. Well, I mean, I just want to interject, like, that's not pretty remarkable. That's about astounding. I mean, to turn around so quickly.

And one of the things that for a lot of you listening, if you don't know, we are human blood tests for Lyme and and pleasant stuff are so not that good as we've talked about in other conversations that from a research and an epidemiology perspective we follow the movement of these tick borne vector borne infections across the country big by seeing where we're seeing positives in animals, particularly dogs, because their immune systems seem to be reacting more robustly.

So a lot of our acute Lyme are acute in a plasma. You're going to see a quicker drop you get and you're going to see a quicker recovery. But you're also going to see blood tests are much, much more accurate, like your standard a lie.

The last time I checked was something like 85% accurate, whereas the human one, if you do two different tests together, it's only a 5050. So you're really it's so important.

And but to go from just low hemoglobin all the way up to like much higher, I mean, that's a pretty remarkable change, you know. And granted, these ranges are a little different, Jocelyne, than in humans, but men have platelets.

That's ridiculous. That's from like, I'm afraid that your dogs are going to bleed to death, which could be your child or your friend. Now, think about the other thing that I just thought about as I was rambling here.

Your cat brought it in and the dog may have gotten it from being the dog or the other dog or the cat, but we, many of us have pets, you know, and we don't want to, like, poison our pets, the toxins, but we need to have being armed with something that can help us.

So I just think it's this is just very dramatic. And another point is, like in humans, one of the things I would wonder and everything's better, so I'm not too worried about it.

But in humans, this pattern here looks more like the ecosystem. Anaplasmosis interesting. Right? But dogs are different, so you can't take it all the same.

But I mean, most humans would go from like 13 to 14 and then the 16. But I have seen drops this big and I've seen drops this, you know, go back up that quickly when you get the right treatment.

And it's usually, which I love about what you wanted to talk about tonight was acute tick borne stuff because we all know about it, you know, by assigning chronic stuff, but acutely.

What's so cool about it is the sooner we treat these things generally, the better people go. Yes. So hands down. That's been my clinical experience. Can I show you one other cool thing that happened?

Absolutely. Okay. So here here is Dorothy. This is the day after we tested her. And when she could, she could barely walk the day before. So this is her and chickens and Derek on bio site.

And how I now, again, I wouldn't have let her play like this if I'd known her platelets were so low, but I didn't so but it's just a remarkable thing to watch her symptoms resolve overnight.

It's really so powerful. And that's what should happen now. Here's here's here's the question. First of all, to finish what I would start is that's what should happen.

We should proper diagnosis, proper treatment better. That's what everybody wants. But we know that that doesn't

always happen. How long ago with that?

Was that and is she symptomatic now? She's symptom free still. I did. I treated her for probably I mean, I'm going to be guessing about six weeks at high dose and then she's she's been symptom free since then and that was last.

How many months? Roughly a year and a half ago. Yeah. So to me, this is where we go prophylactic half ass or watch and wait, which just means we're going to let you get sick and then not treat you for a while, then wait a while longer, and then send you to one of us, which is totally unacceptable, which is why we're doing this summit.

And I say a lot of this tongue in cheek, everybody. I mean, there's certainly people out there who know it. They're on top of it. And not everybody gets chronic Lyme disease.

We've talked about this. We'll talk about it more. But when we're looking at like you did six weeks, that's the general consensus. Somewhere in that three, four, six week range, if you're going to give them docs is cyclin.

But the problem is after my dioxin cycle and now I have to go back in continue their probiotics for a long time worry about their candida and again for me with a human being, I might do both.

In fact, I almost never if I do a prophylactic treatment, it is almost never without something like by a side and in combination with it, you know. So it's I just think it's so good. So it's just great.

I'm so happy that we can kind of talk about that, you know. And it did in the research. It also prevented the polymorphic shit, right? That can happen.

And so that's another reason to use it up front is that it can stop that conversion from Sparky into round body, which then can become that her sister form at least in vitro.

It did that which is really powerful, you know to as a potential prevention no claim but as a potential prevention for long term or persistent. What's the right terminology now?

Well, this is funny because I just did a lecture on this this weekend. I talk about it all the time. I may now that you're saying this, I'm probably going I should do like a little thing for a quick little lecture on this for our summit group said they as part of the summary now that I you know because I always like to create more work for myself but it's important we call them logarithmic are growing forms so exponentially growing rapidly reproducing growing whatever but rapid reproduction and strep 13,000 times in a day, rapid reproduction in Lyme, reproducing once every like 11 to 21 days.

I mean, that's a massive difference in reproductive rate. And then we have non growing, which is also called stationary, which is also called for sister and then all the other things we're talking about are subsets thereof.

And what I find really interesting, Jocelyne, that you bring up that point is that when we're looking at this, there's really only two things that have ever.

Well, let me step back, Biocides. The only thing I know of that's been studied to prevent the formation of round body forms when it's being used as a treatment.

Crypto lepus is the only thing I know that actually annihilates round bodies so they don't reproduce. But what I don't know because they didn't report this is if they if an intense fire treated with crypto lapis became around body and then was inactivated or they prevented it so they didn't do it.

That wasn't the purpose of the study. But there's really I mean, there's a few other herbs out there that have been shown in vitro to address.

Synergy with antibiotics, persistence, and prevention

And mostly what they do is look at stationary overall and biofilm specifically because these are buzzwords. But the round body, this what blows me away.

I'm having like, you know, flashbacks of like my first eyelids and they're like, here's a spider, KEITH Swimming. Here's when we drop water on it. Nothing has been changed about nothing.

When we drop one drop of ceftriaxone on the thing and we're doing a video with the electron microscope, it rolls into a ball immediately. It literally can sense what can kill it and what can't.

And so these round bodies are so rapid and then if we go backward, you know, so that's important to me to know that bio site is a part of my armamentarium because it can do something that we don't know anything else can do, which is help people not get persistent.

Is it the be all, end all in my work? No. But is it a core part of everything we do? Because, like you said, everybody's got so many things. I mean, I think everybody who's talked on the summit is like, hey, there's a lot of people who have a lot of other things going on, including their preexisting diet and and gut health and microbiome.

But the last piece just before, because I know this is I want to hear more about what you have to say, but you get me so riled up, right? One of the things that.

I love it, I'm learning. Right. So when you look at the CDC statistics, the one of the things they quote all the time is like 80% of people with acute Lyme are treated with a standard protocol, which would they mean 10 to 21 days of doxycycline will get better and have no further symptoms.

And that's probably true. The problem is the other 20%. It's funny, I have a little the board that runs my microphone. I have a cricket thing, but I don't remember what button it is, but literally it's crickets.

They say they're silent. So what about the other 20% than Johns Hopkins? Like in 2019 or 20 did a study and they basically infected mice and they had the ticks by mice and what they found about found out about was that somewhere in the neighborhood of 20% of the mice ended up getting persistent from the ticks.

So the tick actually would develop persistent cells, brown bodies, micro colonies, which is another name for a biofilm. And they would inject the mouse instantly at the time of infection.

So they coined the phrase, we think, and this is a small study that needs to be reproduced. So again, we're making no claims. But so they said you can get persistent Lyme disease in one of two ways.

The first one is the way we think about you get infected, your symptoms take forever to come on their nebulous diagnosis. Ms.. Undertreated prophylactically treated with a single dose of doxycycline and now your lab results in your it.

Don't work and your symptoms are all weird. So then we go down the road and you come up with a late line. That's the typical way under or non treated Lyme over time will lead to late Lyme or persistent Lyme.

The other way they go about 15 to 20% could have early persistent Lyme which means you get bit and you have late Lyme disease a.k.a chronic Lyme disease because of and I'm not and the problem here is there's not a great there is a definition of chronic Lyme it's not amazingly agreed upon but the difference is we have persistent Lyme, which is an agreed upon term for describing your symptoms.

Right away they get the reactive, they get like full on like 6 to 12 months worth of infection, arthritis within weeks, so and on and on. So anyway, I'm sorry to off on a tangent, but it's just like it's so important.

If we can treat people early on, it's so much better. And if we can prevent our treatment because doxycycline is known to make persistence. That's not. A bad thing.

You just got to know it. And after you do your three weeks or six weeks of treatment, you might want to think about doing persistence or maybe just put them together in the beginning.

That's just my thought. No, I love that idea. And I mean, it's what that's what I'm here for is just to try to get people to think about it in that way because and it is really it's, you know, one time is remarkable, right, when you see it once.

But when like for me, when I saw it without fail, I saw people respond positively. I mean, I have before and after testing with like doses in a human patient as well, you know, and I just it it just becomes this for me.

It's like a evangelistic almost, because I want I want everyone to have it in their medicine cabinet. I don't want any parents to have to deal with their children having chronic Lyme disease.

I don't want anybody to have to deal with it or for patients to lose their animals or I mean, humans, people to lose their animals, whatever it is when it's so it's really so straightforward.

From my perspective to to, you know, have that on the shelf. And I mean, I just think it's amazing. You know, these products work in ways that we don't really understand some of it.

Right. And we know that like things like Astragalus, which is not in the bio segment but is in the bio tonic, that high dose astragalus actually prevents transmission of the from the tick to the human, which is an amazing thing.

We don't even think about that. Right. But it upregulates the human immune system where it meets the tech right in the epidermis or in the dermis. And so that is amazing to me, right?

To just to think about plants, then you layer their activities. So say we have an antioxidant effect, we have an antimicrobial and we layer that with a botanical that breaks up biofilms and something that modulates immune activity.

It just becomes this very synergistic and expanded activity from a single a single herb. And it's to me, it's almost like magic, you know, when you see what happens.

But it's funny, as you're saying, that I'm like, do we still keep talking about this? We, you know, yeah, we do. Because the thing is like there's so many pieces, but like bio tonic in my understanding is it's an adaptogenic kind of like it's going to help our adrenals, whether they're high or low, which we love about Adaptogenic and all kinds of other benefits.

But now think about how Lyme, the reason that Lyme is able to infect people so easily in certain situations is it blot it like the ticks, saliva, downregulated to one response which is supposed to hit it right away.

And then we have all kinds of problems chronically from that. What if we could jack it up like you were saying, to an optimal level for a human? I just it's so funny.

I was talking to a bunch of guys over the last couple of weeks because their testosterone. Right. They get out there during the they're in the lower end of the normal range.

But what people need to remember about and this is just a completely off the cuff, different kind of example, but your free testosterone used to be like five times higher than it is now on average.

So the normal range has been changed as we get sicker. So then the lower end of the normal range is not normal. And most people don't feel that well. So just you can expand that out to other areas of medicine.

So if our immune system is getting beat down by all the toxicity in our environment, but we're hanging on by a thread and then we get back by a tick, that's a perfect storm.

So if we're using something like a bio tonic or whatever, our, our form of these whole herbs are these combinations of herbs that were extracted, you know, properly, like you said, you can actually decrease the rate of transmission.

And then we're dealing with less bugs and then we're dealing with less possibility. And it's like it's just over and over. And there's one other piece I want to throw out the public service announcement, because then this is what happens.

Everyone I talked to Jocelyn, like we go back and forth for hours like this, I promise we're going to wrap up soon because we've been going for a while here.

But one of the things I noticed and I learned this Lyme is I got I got bit by ticks all the time and then I got Lyme and I was getting still getting bit by ticks if I went outside.

But then I started to do the yoga and the mindfulness and then that led me to the dietary change and that led me to all the other lifestyle changes. And then I was 70% better before I met the docs that needed to help me.

I needed to help me get the of the way. But I did all that work first. But what I've noticed going back and looking is I can't recall the last time I got bit by tech.

And anybody who knows me, I'm outside literally almost every day for like I have to play in the woods. It's my thing. And literally after I learned from Lyme disease through yoga to listen to my body and stop putting the junk crap in it, I think what happened was I don't smell good the ticks anymore because I have become a shitty host for viruses and bacteria and parasites.

So I'm just. Going, that's so interesting. And Michelle Perel talks about that. You know, she she talks about she wrote a whole article about it for the challenge and letter that once people have Lyme, it's like they're a magnet for other ticks and and taking care of it or resolving it changes that so had never heard it before.

But just so you know, there's a lot. Of talk to her. About this story. Well, and there is research on pheromones stuff. And I think these these these things are so smart.

There's that study where one person had previously had had Lyme and had some post-treatment Lyme symptoms in the Xeno diagnostic study. So what they did is they put sterile ticks on the needs of people who had had had Lyme and some controls.

And one of the people who had had Lyme and had symptoms was able to, as I say, in fact, be the most accurate way. They didn't culture it. They just found the DNA of Lyme disease in a sterile tick after it fed on a person.

So basically the human infected the tick. So it's not just about that. So this is a lot of our people, Joslin, who are like they get the bi tick right or? Let me let me go backwards.

They have Lyme they're starting to get better. They get bit by tickets on for 15 minutes and then the shit hits the fan and it's probably not that in that 50 minutes they get injected.

There are some ticks that have the spider Keats in their saliva, so it could be a near instantaneous injection when they inject the anesthetic in the in a coagulant so they can do the blood meal.

But more likely it's the chemical communication between the spider key and the tick that have been doing this for over 13 million years. And keeping each other alive, that they were dormant and they may have stayed dormant forever.

You got bit by the tick and it's the chemical communication. Even if you pull the tick off, maybe had it come out. So we want to do things like bump up our adrenals.

We want to make sure and I should say optimize. So work with your health care professional, but Don't just take

the answer of if it ain't broke, don't fix it to be okay.

I mean, most of my patients get better and when they do get better, they're healthier than when they came in. And that's what I hear from everything you're saying every step of the way, and then let's prevent it from becoming a problem.

So that's the thing. I will say in kind of it, and what you made me think of is that what I'm very grateful for is that I'm not afraid anymore to go into the woods because of this.

And that that's huge because here in Minnesota, there's only so many months where you can actually can go comfortably into the woods.

Pets, personal prevention, and closing resources

But it really changed that for me from fearfulness and the unknown of how to work with it to being like, you know, it's no big deal anymore, right? Me and I know it.

It can be a big deal and it is a big deal. But it has taken away some of the ink, I mean, a huge amount of anxiety for me and to allow me to just enjoy being outdoors and connecting with nature.

Yeah. Yeah. And that's what I love. And so I'm so glad that we were able to have this time to talk about all this stuff links to so they can find we know that, you know, bio science is nice and easy bio CENTCOM so folks can reach out learn more about the what's available certainly I right we have products on our website and we write about it and I'll make sure it's all in our Summit Resources pages.

Is that exclusively what you're doing or are there other places people can find out about the work that you're doing these days? Well, if you go there, if you you can have we have training and we have all sorts of resources.

We have a lined information sheet. We have, you know, just basic information for basic Lyme stuff, mold stuff, you know, so people are just getting into learning how to work with this.

Then it's a very nice resource for people. All of that's available on the website. The other thing is, if it's okay, I'd like to call out that we are looking for practitioners who would like to work with bioscience in this way as an active research project.

And so if there is someone out there who's interested, a practitioner who's out there interested in working, in using, doing research with us, where the line for patients who decline Doxey cycling who don't want to use that recycling, we would love to partner with you in that way and we do work on ongoing.

We have a research department as well and we do work with practitioners in that way. So if there's some if there's anyone that would like to collaborate with us in that way, then I would invite you to reach out and you can just email research at bioscience dot com.

That's the easiest way to to contact our research department. How awesome. Well, what a great opportunity for other practitioners listening to learn more.

You guys do great educational stuff, but this is one of the things that I love about the people we're working with and bringing in front of you on the summit.

It's not just here's our product and use it because we think it works, but bioscience on the forefront of doing the research and having had conversations with Jocelyn and other members of the team, they're actually asking really questions that are really hard for anyone to research, which I just think is really good.

So we're going to continue to get really, really good research and really, really great products. So, Jocelyn Strand, thanks so much. I should I didn't call you Dr. Strand earlier.

I should. I usually like in the beginning in the end, say, doctor, I want to honor the commitment you've had to your thing. But yeah, you know, we're all it's okay.

Anyway, thank you so much for being here. Thank you. Dr. Moorcroft. Everybody just want to say thank you for joining us for this really exciting conversation, learning a little bit more about by the side and all the things we do.

There's also some really cool mold and other stuff we use it for. So this is just the tip of the iceberg. But I really wanted to have this conversation about the acute changes and also how we can help our pets, because that's kind of like I got my dogs, my cat, got a whole bunch other friends around here.

I don't have any chickens where I'm at, but it's so important to me that our whole family, not just our human family, are nurtured and protected. And also, you know, looking at the nutrition, I know this is I was supposed to be closing, but one little plug looking at nutrition in your dogs and your cats and optimizing it the best you can.

Well, potentially, based upon my personal experience and my experience with myself and my animals, diminished the amount of ticks they might bring in.

Right. So just lots of love to all of you. Thanks for listening. And really, I hope you enjoyed this episode of The Healing from Lyme Disease Summit. And until next time, Dr.

Tom Moorcroft, we'll see you soon.