Tick Bite Prevention and Testing: How to Stay Safe and Spot the Signs Early Transcript

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Intro to Tick Transmission and the Podcast

10% of the ticks out there actually have attached to a host and were interrupted. So they were already primed. They're already further along. Maybe they didn't start transmitting pathogens to that host, or maybe they did.

We don't know. They were interrupted. So a process has already happened within the tick to make it faster to transmit pathogens when they attach to a second host.

which could be it, right? So if there are 10% of the ticks out there in this condition, and then like 83 to 100% of those ticks transmit within 24 hours, and then 100% of those ticks that are already primed transmit within 48. Hi, and welcome to the Lime Bites podcast, where we shine a light on the misunderstood science of Lyme and other vector borne diseases, as well as the truths that many still miss.

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

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 We share the facts that most people miss, we challenge outdated thinking, and we give both patients and practitioners the tools to heal smarter.

Guest Introduction and Background

So let's get into it and change the way we heal Lyme. Hi, and welcome to another episode of I Am Your Host, Dr. Maria Hinchey. And today we're going to talk about tick bite prevention, IDing ticks, and direct tick testing.

Here to discuss all of this with us is naturopathic physician, Dr. Alexis Chesney. Welcome, Dr. Chesney. Tell our listeners a little bit about yourself and your practice and how you came to specialize in treating complex chronic illness.

Hi, Dr. Hinji. Thank you so much for having me. It's great to be here. I came to become a naturopathic physician over 15 years ago, and now I am specializing in tick-borne disease.

I moved up to Vermont to do a residency, and I had no idea that I was on the front lines of Lyme and tick-borne disease there. Unfortunately, many people were being told there weren't even ticks in Vermont, let alone Lyme disease.

So I had no idea that I would just see many, many people and thank goodness, witness their healing journeys along the way. So yes, I specialize in Lyme and tick-borne disease.

I'm really passionate about prevention because then after seeing some people heal, I would see them come back with tick bites again and really want to help them prevent getting the tick bites in the first place or again.

and helping them and their families, of course, enjoy the beautiful outdoors that we have in Vermont without worrying about tick bites. So I also wrote a book called Preventing Lyme and Other Tick-Borne Diseases through story publishing, and that's another way to be able to inform yourself about this important topic.

Yes, it's a wonderful book. I have it. And, you know, when it comes to all of these vector borne illnesses, prevention is definitely key. So why don't you start off by telling us why is tick identification important?

Yeah, I think tick identification is so important because then if you know what type of tick bit you, you know which

pathogens to look for.

Why Tick Identification Matters

So, of course, this is not usually what's coming to mind when someone has a tick bite. It's usually not a very pleasant experience and you want to remove that tick as soon as possible, of course.

And people don't often think about saving it, but please do because then you can identify it and you can get it tested to find out what it is carrying.

If we know the type of tick, you know, there are ticks all over the world and they carry different pathogens. And of course, we talk a lot about Lyme disease.

We're in the Northeast, so that is certainly the number one tick-borne disease from the black-legged tick or the deer tick. But there are other pathogens that that tick carries and other ticks can carry.

And if you're traveling or if you live in a different area of the country or the world, you need to know what these ticks are carrying so you know what symptoms to look out for after a tick bite.

Yeah, and it's difficult because even with the black-legged tick, like if you're looking at a nymph versus an adult male versus an adult female, they look so differently.

So I can't tell you how many patients have come in. They're like, no, it's fine. It was a dog tick. And I'm like, okay, did you have a picture? Did you save the tick?

And it's actually the female deer tick because they're so used to seeing either that nymph or they have that image of the male tick in their head. So yeah, it's so important to know what you're actually dealing with.

Can you tell us a little bit like what, so what pathogens are in the black like it took? Yeah, so the Ixodes scapularis or black-legged tick on the east coast and north-central states of the United States and then to Canada.

So that tick carries, of course, Borrelia burgdorferi and Borrelia mani, which both cause Lyme disease, but they also can carry Borrelia maimotoi, which causes tick-borne relapsing fever.

In the north-central states, we also see Ehrlichia muris euclarens, which actually We're now apparently a tick report, which we'll get to is seeing them in some ticks in New England.

Also, we see Babesia microni, Powassan virus, and Anaplasma phagocytophilum. Okay. And then I'm going to have you kind of go over just, you know, the ticks that are, well, actually we're not going to stay on the East coast because this is all over the country.

So, you know, go through in whichever order you would like and don't forget about that Lone Star tick. I want to talk about that one too. Yeah, yeah. Let's talk a little bit about tick identification and comparing these ticks.

Absolutely. It's important. So just to take that black-legged tick and think about identification, we have that sputum or the dorsal shield.

Black-Legged Tick Pathogens and Identification

So please look it up. You could go online and find it. Familiarize yourself with where that is on the tick. Of course, these ticks are very small, so you may need to get out a magnifying glass.

it's going to be close to the mouth parts. So for black-legged ticks, they have black legs, of course, and they also have a very flat, solid black dorsal shield.

So with female ticks, which we see a lot of in the spring and in the fall, we tend to notice those a little bit more because they have that reddish tan abdomen.

But the best way to identify a tick, because maybe there's a male, maybe there is a nymph, of course, or larvae, the best way to identify these black-legged ticks is looking for the dorsal shield.

And that is going to be solid black. Why I also bring this up is because it might be engorged. And I have patients like that too who say, it's a big tick.

It must be an American dog tick. And so they just throw it out or whatever. And I say, no, please bring it in. Please take a picture or send it out and get it tested.

And sometimes we find out it's actually engorged. It changes size when the tick attaches and starts its blood meal. It's going to change the size of the tick and distort that abdomen.

So that female abdomen that looks like that nice reddish-tan color that can really get our attention will change into, you know, what looks like a little seed or a grape or something and is grayish.

So it's not going to have that color, but what will stay the same is the dorsal shield. So we really want to see that dorsal shield. It's going to stay the same size, the same color and shape, and that's that solid black, or the black-legged tick.

And since we're talking about black-legged ticks, there's also the western black-legged tick, like Sodis pacificus. And so they carry similar pathogens and they look pretty much the same as the Eastern, as we can call it, black-legged ticks.

And you're going to be seeing Borrelia burgdorferi, Borrelia mani, Borrelia maymotoi, I'm sorry, not Borrelia mayna. So Borrelia burgdorferi, which causes Lyme.

Borrelia maymotoi, which can create tick-borne relapsing fever. Anaplasma and Babesia duncani is what we see in the West. But of course, we're seeing that not every tick is staying in its state that, you know, we think it's supposed to be in, or its little geographical area, and not every pathogen is staying, and only those ticks that we think should be having them.

So yeah, we'll talk more, I'm sure, about tick report and testing and data that we have on this sort of thing. But maybe to move on to the Lone Star tick, I think that one is a very important one to think about and recognize.

So these, as might sound, you know, were identified first in Texas, but have moved up. They're definitely in the Northeast. I don't see as many in Northern New England, but they are there and they're becoming more of a problem.

Maybe in the southern New England or Atlantic states, we definitely have those Lone Star ticks. So this is Ambileoma Americanum, and the pathogens that this tick can carry are Ehrlichia stari is the disease that it can cause.

Actually, the pathogen has not been identified. There's a lot of discussion in the literature, but no one has agreed upon what is the pathogen that causes star eye.

And star eye actually causes Lyme-like illness. And so it's thought maybe it's Borrelia. It can cause an arrhythmia of migraines like rash. But what I really am concerned about is there's probably an epidemic of star eye, especially in southern states, but even up north.

And it's going unrecognized because we don't have a test for it, for humans anyway. So yeah, so that's the Lone Star Tick, and when you look at the dorsal shield, you're going to find a dot on that dorsal shield, which is really nice.

It's a yellowish dot, and that can kind of alert you to, hey, this is the Lone Star Tick. And then with that tick, not that we're getting into all of the symptoms and whatnot with this discussion, but that's linked to the alpha-gal issue as well, correct?

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Lone Star Tick and Alpha-Gal Syndrome

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So join us at Pompano Beach or virtually from anywhere. Register now at LymeBytes.com. That's L-Y-M-E-B-Y-T-E-S dot com. Yes, exactly. So that's a non-pathogenic disease.

So in the tick saliva of the Lone Star tick, you can have a protein that is transmitted and that can create in some people an allergic reaction. So they can create immunoglobulin E and exhibit an immediate hypersensitivity reaction, an allergic reaction.

This can look like hives. rash, itchiness, anapalaxis can be scary. And this is after somebody eats mammalian meat. So you can develop, not everybody's going to develop this, but if you have this reaction in the immune system to this protein that's being transmitted, you can then become allergic to mammalian meat because it's also in those products.

Yeah, I guess it's a whole topic unto itself and we're starting to see that. I'm seeing a couple of cases now, you know, in my practice up in New England.

So, yeah. It's scary. Yeah. Okay. So do you want to wrap up tick identification or do you want to talk about the dog ticks a little bit? Yes, yes. So we have the American dog tick.

So that's dermocenter variabilis, and that tick can carry francicella tularensis, which causes tularemia, and rickettsia rickettsii, which causes Rocky Mountain spotted fever.

So I think this is among clinicians a discussion, you know. Personally, in my practice, I haven't come across anyone in Vermont, New Hampshire coming in with a dog tick that they've tested that's been positive for any pathogens.

But I've heard, you know, other people in the Northeast are feeling like these American dog ticks are transmitting diseases. And certainly throughout the country and other geographical areas that we find American dog ticks, they do have a higher chance of carrying these pathogens.

So it was interesting actually thinking about tickreport.com. This is my favorite tick testing facility. You can send your tick there and get it tested.

They also have a database, which is so helpful because they've been collecting thousands of ticks from customers and our patients over 20 years plus.

American Dog Tick and Regional Pathogens

So I go on every once in a while and look through that database. And what I did recently, because this question comes up a lot about, well, do you test an American dog tick or not?

And I think, of course, it's going to be most important to do as much as you can. right? So let's test every tick and be extra safe. But what are the chances of this American dog tick carrying pathogens in the northeast?

So it was about a dozen ticks out of 7,000 in northeastern states. I had to just, you know, scribble down some numbers, and so that was about what I saw carried pathogens.

So it's very, very uncommon, just to say. It can happen, for sure. It was pretty uncommon. It was like 12 out of 7,000. Yeah, around that number there.

Yeah. And so that was something like 0.13% or something like that. And so, yeah. And the thing was, though, when I was doing that, I was taking down which pathogens, right?

Because we're only supposed to see rickettsia and parenzacella. And Borrelia came up a couple times. anaplasma came up a few times. And so I inquired about this with Paul Killinger at Tick Report, who's amazing.

And he was actually thinking that some of it might be from contamination. So maybe these ticks are, of course, we don't know, maybe some of these ticks are carrying these other pathogens.

unexpectedly, or also he was telling me about this procedure that a lot of vet offices have. So if you bring your dog in with an American dog tick, they might just pop it into this alcohol solution.

And this is the same alcohol solution. And after they remove the tick, they throw it in this container of rubbing alcohol, and then the dog leaves, they'll take it out and send it out to be tested or give it back to the owner to get tested.

Meanwhile, You know, how often do they change out the rubbing alcohol? So there might be DNA from a black-legged tick that does carry Borrelia and anaplasma that was in there.

And so it may have then contaminated this American dog tick. So that was really interesting because that was boggling my mind. You know, why are we seeing that?

And there is not research showing that there's Borrelia or anaplasma in these American dog ticks. So yeah, all to say we know a lot, which is great. We're learning more.

It's great to be able to test these ticks and actually plot out in the U S and hopefully more across the world where these ticks are, what pathogens they're carrying.

But we have more to learn, of course. Yeah, definitely. Thank you for that. Can you talk just a little bit about transmission times with the different pathogens?

Sure. So with Borrelia burgdorferi, there's a study showing there's sort of a bell curve from 4 to 72 hours. And yes, the longer this tick is on, the more likely that it might be transmitting pathogens and Borrelia burgdorferi in particular, but people probably notice that if you go to urgent care or talk to your primary care, I'm always hearing different numbers quoted.

Like somebody will say, it must be on 48 hours before the tick transmits slime disease or, oh no, it's 24 hours. Like there's always a different number out there.

Just so funny. And we know that it can happen in as little as four hours, right? Not all the time, but it's possible. And so, you know, why are we claiming these other numbers?

You know, I mean, I think it's much more important to err on the side of caution than say, no, you can't possibly have Lyme unless it's been attached a certain amount of time.

The other thing that's really interesting, a more recent study had shown that 10% of the ticks out there actually have attached to a host and were interrupted.

So they were already primed. They're already further along. Maybe they didn't start transmitting pathogens to that host or maybe they did. We don't know.

They were interrupted. So a process has already happened within the tick to make it faster to transmit pathogens when they attach to a second host, which could be you, right?

Transmission Timing and Rapid Infection Risk

So if there are 10% of the ticks out there in this condition, and then like 83 to 100% of those ticks transmit within 24 hours, and then 100% of those ticks that are already primed transmit within 48 hours.

So now we're saying, you know, it's definitely happened within 48 hours. Anyway, that's just to say You know, there are people that have certainly had acquired a pathogen from a tick before 24 hours or whatever it is that we typically hear out there.

So I think definitely, you know, taking action and knowing that and taking care of yourself after any tick bite for any length of time. So Powassan on that note, you know, we think a lot about Lyme disease, but what about these other pathogens, right?

Powassan happens within 15 minutes. That transmits from a tick within 15 minutes. Thank goodness it's a rare disease, but it can be fatal and it happens that quickly.

So all the more reason for prevention and not even getting these ticks on you in the beginning. Yeah, absolutely. Speaking of prevention, what are the most effective prevention strategies that you like to use with your patients and with yourself?

Are you suffering from Lyme disease or another complex chronic illness and aren't sure who to trust when it comes to herbal supplements? Hi, I'm Dr. Mariah Hinchey, founder of Lyme Core Botanicals.

As a naturopathic physician specializing in complex chronic infection-driven illnesses like Lyme disease, I needed herbal medicine I could truly trust.

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

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Learn more at Lyme Core Botanicals. That's L-Y-M-E-C-O-R-E dot com. Yeah, yeah. So one of my favorites is treating just socks and shoes with permethrin.

So permethrin is a chemical. It is from its source from chrysanthemum, but it is very potent. So it is toxic to our skin. So that is important to note.

when it is wet and when it's dried, it is no longer toxic to our skin. But there's this great study showing just treating

socks and shoes with permethrin, which repels ticks, will be active for six weeks and it will decrease the chances of getting a tick bite by 73 times.

So that's pretty incredible. So like for me, what we do is we get out all the shoes and boots, sneakers, put them outside, put on some gloves, get permethrin.

There are a lot of companies, Insect Shield makes it, Sawyers, you know, there are a lot of easy ways to find that at a hardware store, tractor supply store, online.

So you bring that outside. 0.5% of permethrin and you spray down these shoes and socks if you want to do those or other things too and let it dry probably an hour or two depending on how humid it is and then once it's dried it's safe to you know let animals by, kids, yourself, bring them back inside.

And then it lasts six weeks, which is great. But I put it on the calendar. So when it loses that potency, bring them outside again and keep up with that.

And when we think about maybe more so for adults, when we're just walking through the woods or we're walking across our lawn, walking in some leaf litter, it's really gonna protect us in that way.

If you're rolling around on the ground, if you're having fun with your kids, if you are a kid, and you like to be, you know, adventurous and getting out in the brush.

Then you might want to think about actually treating some clothing.

Tick Bite Prevention Strategies

So you can do it yourself. I'm really soaking it and then hanging it to dry. Or you could also send some items out to a place called Insect Shield. They're amazing.

So when it's commercially treated, your clothes will hold that treatment much longer. 70 washes in the washing machine. So I like to use a combination of these things.

So maybe do the socks and shoes yourself, or you can buy a pair of socks. Like I actually bought a bunch of socks from Insect Shield, because then I know they're my insect shield for metron socks, you know?

And then put them up over the pants. But, you know, that's one thing that people bring up a lot to me actually is, but I, you know, I tuck in my pants and I tuck in my shirt and I'm like, well, what about your neck?

What about your head? Did you tuck in anything there? so with permethrin this is fantastic tuck it in use permethrin it's going to be very effective but if you're not using any repellents at all and you're just tucking in your clothes i feel like it gives people a false sense of security because those ticks will just keep crawling up upward.

And so maybe they'll get here. And then I see a lot of those people, oh yeah, it was in my scalp, behind my ear. They didn't even find it because it's in your hair and it's hard to find once it gets up there.

But yeah, those are some favorites. Also thinking about, you know, a natural option. A lot of my patients like to use nontoxic. substances so cedarside tick shield is cedar essential oil and that is recently studied against DEET actually and shown to be just as effective at repelling ticks.

So I'll do a combination you know do the permethrin on your shoes and socks maybe some clothing if you're out there you know if you're a farmer or a logger or you're just outside so much or you know when you garden when you hike or whatever you know making these decisions according to your lifestyle and then on your skin or if you're in shorts or something then using that cedar side.

You do have to apply it more often than we think though so cedar side are any repellent for that matter, I would say

every one to two hours. That's what they noticed in the study was actually you need to apply DEET more often than we thought as well.

So those are some good, yeah, that's like, you know, helping on the person, thinking about your person to prevent tick bites. One of my favorite things for the landscape is tick tubes.

So using that permethrin, we can apply that to thinking about your yard or your property and trying to cut down on the number of ticks that you get when you just go outside or you have your dogs out and come in or cats or kids or whoever it is bringing in ticks that indoors.

So if you want to look it up, you can actually buy tick tubes, but you can also DIY it. And I talk about that in my book, how to do that. It's one of my favorites.

So using tick tubes decreases the chances of getting a tick bite by 93%. Huge, huge impact. And I hear about this all the time when I recommend it to a patient and every year I try and slip in a little more about some tick bite prevention and then people come back and say, hey, you know, those tick tubes really made a big difference.

So it's fantastic. So what we're doing here is we're trying to really look at the mouse population. So that's actually where a tick will first get its blood mail and actually acquire Borrelia, Lyme disease from that tick because ticks are actually born, the black-legged ticks are not born with Borrelia burgdorferi and the Borrelia that causes Lyme.

So, ranoplasma, etc. So, they need that blood meal and usually they're doing that when they're super small. They're larvae, they're the size of a period at the end of the sense.

Those ticks often do not get onto humans. And so they don't have much energy, they're in the leaf litter somewhere low to the ground where it's humid, and they're going to attach to somebody like a white-footed mouse.

Then they acquire lime, and then they can become nymphs, a little larger, the size of a poppy seed. These are often ones that we see in the middle of the summer, and often where people don't see them, but they get a tick bite that they don't see.

And it transmits lime because it probably acquired it from a white-footed mouse. So let's really target that mouse population so that we kind of interrupt the cycle that's happening, right?

And we prevent us getting lined, those tick bites. So looking at tick tubes, we are saving our paper towel or toilet tissue tubes or something like that.

And then we're saving lint from the dryer or getting some kind of material like that, like cotton balls, something like that to stuff into these tubes.

and then we go outside put on your gloves get your permethrin again after you spray down your shoes you can do this and you can get the cotton and lint out there spray that down let that dry and then once it's dry stuff it into the middle of those tubes and then we're going to put those tubes into mouse habitat, which guess what is the same as tick habitat, and let those mice find that wonderful nesting material, bring it back to their nests, and then the permethrin on that material will kill the ticks on the mice.

It doesn't kill the mice, for better or worse, but it kills the ticks. And so it can really make an impact of killing ticks in your yard, your vicinity.

And that can decrease, as we said, tick bites. So that's another favorite of mine. I can go on. I know you can. So how much area would one tick tube cover?

Like if you have an acre of land, I mean, how many tick tubes roughly would you need to put out there to make an impact? Yes, you know, their guidelines now, it's escaping me.

It's something like six, is it six tubes per acre? I'm going to have to say, look it up. Yeah. Yeah. If you have a small, like if you're in a suburban landscape, it's so doable.

And then when we get into, you know, 10 acres of land, it's going to be a little more challenging, but some, some people do that or you can, you can still choose to do it just in a, you know, one to three acre area that's closer to you.

Yeah. Or even people have done this at their workplaces. They've done it at schools, you know, just at least the vicinity, you know, where the kids are most of the time.

No, and it makes sense. I think it's got to be more effective than spraying, especially when it rains and washes it all away. I know we try to spray. We try to spray our school regularly, too.

And it always seems to rain the next day when it's an issue. But no, the tip tubes are great. All right, so let's transition a little bit into talking about direct tick testing.

So just, it might sound like an obvious answer, but what would the benefit of direct tick testing be? Right, so like we're saying, if you test the tick, then you can find out which pathogens it's carrying.

Now, if it's found that it's carrying pathogens, let's just remind ourselves it doesn't mean that it was transmitted to you, right? So this test is not proving that.

But it gives you a sense, actually, you know, the nicest news is that it's not carrying any pathogens and then we can feel a sense of relief and move on with our lives.

But if it's carrying one pathogen, two, three, I mean, you know, we know ticks can carry more than one pathogen, then you know which symptoms to look out for.

And then you can, of course, start some prophylaxis. And that's another path of decision-making. But you know those symptoms and make sure to report those symptoms to your medical provider.

And unless it's one of those 10% of ticks that were partially engorged because they got interrupted, I know tickreport.com is also my go-to place for tick testing and where we tell all of our patients to go.

But they'll actually tell you if the tick was partially engorged or engorged.

Direct Tick Testing and What It Can Tell You

And so, you know, in the decision making process, if you see that the tick is engorged, you know, then I think you would probably lean a lot more towards treatment prophylactically if there are pathogens in the tick versus if it's partially engorged or not engorged at all.

Absolutely. Yeah. And I think it's a really personal decision for the patient. And I just love, as you do, giving them all the options that they can choose from, and knowing, of course, no matter what, let me know if you develop symptoms, obviously.

Right. Of course. And reviewing the actual symptoms. I've had a couple of patients who have sent the tick out. It was not to tickreport.com and we're told that their tick was not infected with anything.

And they both went on to develop EM rashes and symptoms. So you just, you know, you need to be careful. And, you know, I think it's a good point that there's really no test that exists really for anything that is 100%. So we need to be vigilant and look out for symptoms, you know, to come on.

Do you know the validity of, and I know it's different obviously with every company, but do you have an idea of the validity of these tick tests? Yeah.

Well, knowing about the process to some degree, it's whole tick testing, right? And it's PCR testing. So polymerase chain reaction testing, which is looking at DNA, right?

So if we have the whole tick, like we can't do this with ourselves, right? We can't put ourselves in a blender and find out, you know, do we have Lyme?

You know, we have to, like, get more creative about these tests. And they do DNA tests for humans, but I think it's totally different because the DNA PCR testing for humans is pretty low regarding sensitivity.

The specificity is high. Like, we know if you find Borrelia, it's Borrelia, which is great, but the sensitivity is low. For the tick, we test the whole tick.

So it's there, it's not there. you know, companies use numbers like 99% or, you know, must be higher than 99 or 95%. You know, 95% is a gold standard.

So, regarding sensitivity and specificity. Yeah. So, well, and DNA, I should say RNA is what they use for viruses and then DNA is what they use for testing for the bacteria and parasite.

Right. So in your opinion, what should a comprehensive TIC test include? Because most companies have several different levels, right? Like there's a $50 test, like with tickreport.com.

You can get, you know, kind of like a bare bones test for 50 bucks. You can have an evaluation for pretty much everything they can test for. For I believe it's $200 still.

What do you recommend? Yeah, yeah, so I also lay out those options. So the least expensive test being the $50 test is going to test everything that is carried by a black-legged tick except Powassan virus.

So sometimes we talk about it in that way, depending on the patient's financial capability, right? So Powassan is rare, but you may not wanna miss that, right?

So I think that's one of the decision points. The $100 covers everything a black-legged tick carries that we know of, right? But yes, if you want to be completely thorough, I definitely have patients that do the $200 test and then you're rest assured that we're testing everything we have the ability to test.

Um, and they also make the differentiation at tick report. Um, of course, black-legged tick versus American dog tick versus a different tick. So, um, if it was an American dog tick sent to them, they would test for those pathogens relevant to it or a Lone Star tick, et cetera.

So, um, yeah, I wish they'd just scoot that. And then we'd be all set, but anyhow. So can you give us a complete list of pathogens that you think should be tested for in case someone's listening that is using a company that we're not familiar with?

Well, there are, I mean, there are also some rare viruses that, like the Lone Star tick, I didn't mention it yet, but the Lone Star tick also carries Heartland virus.

The Rocky Mountain tick can carry Colorado tick virus. So, you know. These are newer, newly discovered, somewhat newly discovered, and we're always discovering more pathogens, it seems like, every few, several years.

But if we want to focus on, like, so for the black-legged tick, we'd want to do anaplasma, Borrelia, Ehrlichia muris, Powassum, Babesia, and then the same for the western black-legged tick.

The lone star tick, we would want to look for Ehrlichia, Francisella, Heartland virus, and then star I, we don't, this company anyway, tick report, because I agree, it doesn't look like there's literature showing what's causing that.

Some companies are testing really a lone starry, which sounds appropriate and it's just a discussion. So I'm not sure what to say about that. I mean, maybe that would be certainly important to look at if it's available.

The dog tick would be Francicella and Rickettsia. If you had a Gulf Coast tick or Lyckia and Rickettsia would be the right pathogens to test for that.

And the Rocky Mountain wood tick would be Colorado virus. Francesella and Rickettsia. Right. So actually I was talking because they don't do that test at tickle court and some other companies do.

Testing Panels, Bartonella, and Starry Discussion

And Paul was discussing how in the literature There was Bartonella found in some ticks, but then there was a discussion about how it was soil contamination, and it's not actually a Bartonella that's transmitted to humans.

So, I mean, we both see lots of Bartonella in our patients, of course. it would make sense to say, we're acquiring this through tick bites. But at this point, and maybe if you know of other literature, please let me know, because I feel like it could come out any day, right?

We don't keep up. But at this point, it doesn't seem, it's not proven that a tick transmits Bartonella. Um, and so I think, I mean, a lot of times when I ask people, there's some kind of flea involvement at some point in their lives when Bartonella is in play.

Um, either, you know, a camping trip with fleas or dogs or cats with fleas or, oh yeah, they visited their aunt who had this flea infestation 10 years ago.

And I'm like, you know, they had all these itchy bites, but that's enough, you know, one experience like that is enough to transmit Bartonella. So yeah, that's my understanding of where we're at at this point with Bartonella and ticks.

Okay, so I have one question, and it's kind of off of our topic, but I want to know your opinion. So we were talking about starry earlier. So do you have patients that you either know or suspect have starry?

And if you do, are you treating them the way that you would treat, like Borrelia? Or what are you doing? How are you handling that if you're seeing it?

Yeah, yeah. I mean, yeah, we don't know. But I think these might be the patients, right, who were looking at a clinical diagnosis, which we should be doing anyway, or was making a clinical diagnosis anyhow of Lyme disease.

But I think these might be the folks who, you know, maybe the tick was negative, but, you know, they've been sick for several years, and they don't remember other tick bites, and the Lyme test is negative, even if we do, you know, a really great, accurate, updated Lyme test.

But they have these symptoms that are, you know, very Lyme-like, and they respond to treatment. So we need to just follow that, of course. So, yeah, at this point, I mean, I just take an approach of how I would treat Borrelia.

because it's really Borrelia of whatever sort and follow that through. Okay, great. So Dr. Chesney, before we wrap up, let our patients that are listening or just our listeners in general know how they can reach you if they would like to and if you have any exciting events coming up or any news that you'd like to share.

Great. Thank you. So you can find me at dralexischesney.com and I see patients at a clinic in Vermont called Sojourns. I also have a private practice and consulting business where I work with clients, whether you're experiencing Lyme and tick-borne disease or complex chronic illness, or if you're a practitioner who would like some mentorship, And then I have a course actually called Preventing Lyme and Tick-Borne Disease.

So if you were on my website, you will find that link and you could decide to take a deeper dive into what we were

just talking about with PowerPoint presentations, PDFs to download, some videos and some extra handouts, some extra goodies.

How to Reach Dr. Chesney and Final Advice

And this course would be appropriate both for laypeople, you know, if you're you know, just a person who wants to prevent Lyme disease and you want to do the best you can for your children and your family in doing so, or if you're someone who has Lyme disease or tick-borne disease, or if you're a clinician.

So I, you know, I kind of bring the, you know, we cover the basics. We also do a little higher level so you can bring this back to your practice and help educate your patients.

Um, cause my, you know, my goal is to end Lyme and tick-borne disease through prevention at this point, right? So I'm very passionate about that. And I also have the book that, oh, here it is.

So we talked about this. Let's, let's see it. So preventing Lyme and other tick-borne diseases through story publishing. Um, and it gives you a little card in the back that you can pop out with these lovely little ticks.

So you can identify your ticks as you're talking about. You find anywhere, you find books, bookstores, Amazon, and you can buy in bulk from Story Publishing if you want to have a little study group or sell them in your office.

What else? I have tick preparedness kits. So we didn't go through all of those topics today, but basically after you get a tick bite, this would be something to have at home, a great resource to use to have on hand to take action after that.

And you can find that at limecore.com. I also have a deer tick bite formula that I use after a tick bite for 30 days. And you can find that at limecore.com.

Wonderful. So Dr. Chesney, tell everyone, what do you think the top three pieces of advice are? You have to boil it down to three that our listener should hear about, whether it's prevention, tick testing, identification, whatever you'd like.

What are your top three pieces of advice? Alright, learn how to identify a tick and keep it so you can test it, right? So just educate yourself on that part.

Do something extra every year. Every year, up your game against these ticks. Take on a new prevention method. So wherever you're at, if you're not doing tick checks, please do tick checks.

If you're doing tick checks, let's do something different. Let's add on some permethrin treatment of clothing or shoes and socks, et cetera. All right.

Is that two? That was two. So three. I don't know. Why don't we say be kind to yourself? Because this can be really stressful. And I think it's really important to, wherever you're in, you know, wherever you are, if you're undergoing treatment for Lyme and tick-borne disease, The idea of tick bites can be extremely stressful, right?

So just know you're getting this knowledge, you're doing the best you can, and keep it up and take good care of yourself through this process. Yeah. Wonderful advice.

Don't lose hope. There are people out there that can help you for sure. Absolutely. All right. Well, thank you so much for joining us. Thank you, everyone, for listening, and we'll see you next time for another episode of Healing Lime.

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