Can Lyme Disease Hijack Your Brain? Transcript

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Introduction to Neuropsychiatric Lyme

Hello everyone. My name is Doctor Richard Horowitz and I'm the co-host of the Doctor Talk Killing Lyme Summit 2.0. It is my great pleasure today to introduce to you, Doctor Robert Brandes Field.

Bob is one of the leading experts in neuropsychiatric, Lyme and tickborne disorders in the world. I've known Bob for a very long time and we're going to discuss today the neuroscience theatrical manifestations of Lyme and tick borne disorders and some of the ways of treating them.

So thank you, Bob, for joining us today. Thank you, Rich, and I'm glad you're educating people. I think it's a great service. That my pleasure. So Bob, just tell people, how did you get into this?

A lot of psychiatrists. They don't necessarily treat Lyme or Tickborne and are aware of it. Why did you get into this? And other psychiatrists haven't?

Well, I was trained as a Freudian psychoanalyst. That was my training. And I did have question that you couldn't blame your mother for everything that didn't really make sense.

And, kind of like that you gave a story some time about how would transition with that word demon possession and all that. Okay. But then it's like there's something more to this, and, you know, how can you explain mental illness?

It's, it's a very complicated formula. It's not a simple formula. And I think pretty early on I thought maybe infection could play some role, but it was hard to make sense out of it.

And I ended up seeing a lot of treatment resistant cases, and I specialized in not and cases that weren't responding. And you had to you couldn't just give an anti depressant and it would automatically work in two weeks and it'd be fine.

So you had to think harder and think outside the box and look at what was it that was causing it and you. So in doing that I found infection maybe played some role at one point there was a slow virus theory.

And then we looked at toxoplasmosis as a thought. And I remember seeing cases like that. And then in the 80s, I was seeing a fair number of, Aids cases, HIV cases.

And in psychiatry, we often see what nobody else wants to treat.

How Lyme Psychiatry Began

So when people throw up their hands and say, this makes no sense, go see a psychiatrist. We we get referred the people that are lost in our healthcare system.

And then once the healthcare system gets a better handle on something, we no longer see it. So in the 80s, we had more of these HIV cases. Then. Then the world embraced HIV.

And then I started stop seeing those cases. But the Lyme cases, I know I can think of Lyme cases going back to the early 70s, but I didn't identify it as that then.

But I could think of it as when I look back at that case that baffled me then that there's something I'm missing here. I know it was the Lyme case, I'm sure, but at the time we didn't have that concept.

So I was seeing some of these in the 80s, and then particularly in the early 90s, and I was seeing more and more

and I thought, well, who can I send these to?

And I couldn't find anybody to send them to. So I had to figure it out myself. And and then once I figured it out, I could see that the infection was playing some role and some would be referred by infectious disease doctors.

And they say, well, they've been treated with the month of antibiotics, so they should be cured. And sure, it's a dangerous word in medicine. Should have never okay.

You should never say should and you should never say never. Okay. But, and I would get these cases and then I say, well, maybe the infection wasn't adequately treated and I would give the antibiotic and they would do better.

And, then it seemed to make sense that there was some process that was driving these people, and they often were a little bit different than some of the run of the mill cases, because they often had everything was wrong.

They had physical symptoms. They had, cognitive symptoms. It's like symptoms. And some of them, it seemed like they kept getting worse and worse and worse with the same treatment.

You had to treat them more and more to do more and more psych meds. And so something was pushing their illness in the other direction, right? And what was that?

And the antibiotics seemed to push back. And it help some of these people. And so then I treated these cases because I, I had to I had to figure it out.

And then I found there was some other psychiatrist, Brian Fallon, and some other psychiatrist, who were Virginia Share who were seeing some of the same things.

I organized the meeting at an APA meeting? That's the American Psychiatric Association meeting in the 90s. And I said, let's get together and talk about this.

And it's like we're all seeing the same thing and let's work together on it. So then we we organized some and I started a internet discussion group for a psychiatrist.

And then we shared information. We went back and forth and then that's continued since then. And and there's been pretty consistently around 750 members in that group ever since.

And some people have come and gone. And sometimes we have psychologists or, or other doctors or, social workers or other people that are are involved in treating the mental aspects of infectious disease.

And we don't just look at Lyme, we look at any infection. So we call it microbes and mental illness and look at the connection there, knowing that it's one theory is mental illness isn't a gene.

There aren't that many mental illness genes. There may be half a dozen you can find, but there are many, many, probably thousands of mental illness susceptibility genes.

And these susceptibility genes may be beneficial in one circumstance. And contribute to illness in another circumstance. And so if it's the formula that we call the disease triangle, so you have some susceptibility and an environmental trigger and that causes a disease state.

Right. So so a question about twins that are different okay. Yes. So so question. Because in this day regarding the microbes in mental illness, it's obviously not just Lyme.

We're seeing a lot of Bartonella which is causing severe neuropsychiatric problems. Long Covid has now come a long, long Covid is associated with a large number of these mental illness cases.

So are you finding that the standard drugs you were saying earlier that one of the ways you recognize that

someone may have neuropsychiatric borne is they're not responding to the classical drugs.

They've got physical symptoms, not just psychiatric symptoms. Right. And resistant. But are you finding at this point things like long Covid, Bartonella are complicating the issues for you?

Like way more than they did with Lyme from years ago, that you've got to think even out of the box more use other antibiotics or other ways of lowering down inflammation.

Because you published on the fact that all these mental illnesses, a lot of them, it's just inflammation in the brain, right? That's driving a lot of this mental illness.

Yeah. Sort of. Although it's like this. These are complex interactive infections. I like that word. And that doesn't lock you in.

Microbes, Co-Infections, and Immune Dysfunction

If you look at what Lyme Islam is, a clinical syndrome that recognizes there was something seen in people in the Lyme, Connecticut area that had some common denominators.

And when you look at that, and this is a project that Doctor Greenberg is working on now, she's looking at the initial cases that were studied by Pauli Murray and an awful lot of them, the greater issue there was like not arthritic symptoms.

And she's finding suicide, homicide, a lot of psych issues with the people that she was looking at. But when people came in and investigated it, they were there was a rheumatologist.

So there was a biased to look at the joint things and ignore the other parts of the illness. And unfortunately, then you had rheumatologist or in fact, these doctors who took control of Lyme disease, but they looked at it from what they understood and they had very limited psychiatric capability.

So then the psychiatric symptoms were put in a category that was called subjective and nonspecific. And like, what does that mean? That means you don't know how to do a proper assessment of these very significant symptoms. Okay.

So then there was an excessive focus on just, muscular skeletal symptoms. And the other symptoms weren't adequately addressed. And and I think those symptoms, like the joint symptoms, are much easier to treat than the Nora psych symptoms.

People that are partially treated often get relief from lesser treatment for the Moscow skeletal symptoms, but not adequate treatment from the Nora Sykes symptoms.

You need more treatment for the North psych symptoms and also the north side symptoms appear later. The average person I see is nine years post infection and and sometimes longer, sometimes less.

So it's like calling syphilis a skin disorder. Yeah, it is in the beginning, but in a later stage. Is it something else? So so what are the what are the most common neuropsychiatric symptoms you see associated, with Lyme and tick borne disorders like Lyman Bartonella.

Why don't you kind of go through some of the most. Common, most common like the most common, you have the brain fog. You have the fatigue. And the fatigue is usually the symptom people complain about the most, but the actual psych depression is actually the most common.

But you have anxiety. You have mixed anxiety symptoms. You can have impulsivity. You have low frustration tolerance. You have, an attention deficit kind of appearance.

Although one thing unique about it is sensory flooding, sensory overload, where it's different than A. D. D. and sensory overload is I can't take too much stimulation.

Like don't go, don't take me to times Square. It's like I can't process at all. I get flooded and overwhelmed. I need a low stimulation environment and, so there and so processing and working memory, those are things and time management problems and, innate intelligence can remain intact.

But there's these other things that impair functional abilities that limit someone. Right. And you were saying earlier and you were saying earlier that even homosexuality, you can see suicides and homicides from Lyme disease.

Right. You've published on this, in fact, a couple of years back in the medical literature. I think it's relevant this day and age because of the Luigi Mangione case that he has chronic Lyme, according to what we've read about.

I don't think anybody yet at this point has gone into this in great enough detail. But it's certainly possible that some of his mental illness and lack of impulsivity and control could possibly be due to the tick borne disorders making this worse.

Well, when I look, when I look at, let's say, tick borne, when I do an assessment of symptoms, only 1% of Lyme late stage Lyme patients show homicidal tendencies.

And that doesn't mean they commit homicide, but they have homicidal thoughts or urges. Only 1%. So it's a small percent. So I don't want to bias the whole Lyme community, but still at 1% when you look at how many people have chronic Lyme, that's a massive number of people.

And now of that 1%, I study that and I've done maybe 5 or 6 different articles. Why I address homosexuality with it. I did the autopsy where there was a homicide and suicide.

And then we looked at the brain. We showed the brain findings, and I've done statistical analysis of of going I've had legal cases of people that were homicidal or committed homicides.

I study that 45, 49 out of 50 homicidal line patients that I studied were suicidal. So particularly you see this pattern where someone has this homicidal urge and they find it, but in comes and is like, where did this come from?

But sometimes then when they act on it particularly, they may they take out a group of people and then themselves, so they may be homicidal and suicidal, and they may even kill the household pets as well.

So a lot of these family, homicide suicides follow that pattern. Some of the school patterns, you know, shootings follow that pattern where they they shoot and then shoot themselves, whereas that's different than what you see with other kind of crimes.

And a lot of the crime that I see is like, bizarre and senseless. It's like it makes no sense. Why would someone do that? It's crazy. It seems illogical, but it's impulsive.

It's there's all different kind of patterns I've seen with it. Right. And do you find it's much worse? I mean, what I've seen is the neuroscience seems to be much worse in the people with Bartonella.

Do you find that also there's an exaggeration of those type of psychiatric symptoms when they have Lyme and Bartonella. Right? I think when you look at it, if someone only has Lyme and nothing else, and Lyme is the most common tick borne disease.

So Lyme is a marker for tick borne disease. But tick borne disease is a complex infection of who knows what. And it can include Berbizier Bartonella. It could maybe we talk so it could also be relapsing fever.

I think relapsing fever may be. Maybe that's the difference. That may be the people that maybe do get more the aggressive side. And it's hard to say what is it what makes that 1% different.

What do they have that the other 99% don't have? That makes them different. Is it a genetic susceptibility or is it some infection that affects the brain in a different kind of way.

But you do see I think Lyme is immunosuppressant, Lyme is immunosuppressant, HIV is immunosuppressant, Covid is. And then when you have an infection, it's immunosuppressant that activates other infections in your body that then become active and it causes a complex interactive infection.

So the formula I have is when you have co-infections one plus one equals 11 not two. Okay. Yes. And we find from the way we we published last year that Bartonella also causes immunosuppression.

We found in the people that had multiple Bartonella species. Those were the ones that most frequently had chronic variable immune deficiency with subclass deficiencies.

The worst neuropathy of the, you know, the burning in the feet and all over their body. They had the worst autonomic neuropathy and the worst neuropsychiatric symptoms.

So you could get you could get Lyme that gets immunosuppression, that activates Bartonella. That makes the immunosuppression greater. Now you get opportunistic viruses or taxa or other things, or you get, Epstein-Barr, and it's or other viruses that would otherwise just be latent.

And a lot of times you see these viral titers go up and the Lyme is more active. And when you've successfully treated the the viral titers drop, even when you're not treated as viruses, the HIV, the herpes type viruses.

So it's I think it's a very complicated formula. And yet we still don't know all the microbes that can be in a tick bite. Okay. And I think every year we find a new one.

And what else is there that we're missing? All right. Like, I remember back, I guess was it sometime in the 90s where you say, well, there's a new thing called co-infections, right?

And co-infections seem to be what's going on and why these people are difficult. We're still in that phase of trying to understand it, but we're still trying to understand all the implication of Braly and all the different subspecies of.

Brilliant. So this is a very complicated thing that we were just gradually trying to understand better. Yeah. You know, and regarding the immunosuppression, what makes it worse when we do the evaluation in our patients, we're finding more toxins at this point.

I mean I'm I'm probably saying at least nine out of ten people, some new patients, I'm not taking that many new patients these days. Just a handful, but one this morning who's about to come to me?

Common Neuropsychiatric Symptoms

She's loaded with mold, toxins. And the doctor who's sending her over, you know, just started testing more toxins, like glial toxins or immunosuppressive.

So, as you said, if you have T-cell exhaustion from long Covid and your B-cells that make antibodies are affected by lemon baat and they've got Leo toxins, your whole immune system is suppressed and these infections go wild. So, at least what I've read about is all of the neurologic manifestations.

And that includes even bipolar disorder, psychosis. You have seen tick borne disorders. Drive some of these illnesses. Correct. Where it's not just a question of giving, lithium or giving antipsychotics, but when you actually treat the infections, they maybe don't need all of these psych drugs.

You've seen this happen over time. But think of it, I think at three basic core areas to look at to, to get some of the complexity more manageable. They think disease drivers and that can be infection.

It can be mold, genetic vulnerability. Those are the disease drivers think of like an avalanche. So it starts it. Then you look at the immune system and what's going on the immune system.

And the third thing are the symptoms. Now if you look in the immune system, ideally you get early inflammation and then you get adaptive immunity and you're fine and it's done with Lyme.

You don't get adaptive immunity, you get persistent inflammation and auto immunity. And it persists because you never get adaptive immunity. But the symptoms are associated more with immune activation causing symptoms than the direct effect of the infection itself.

Some infection some symptoms may be from direct effect of the infection, but a lot of immune mediated. Then you get the symptoms and the symptoms then.

And think of the vicious cycle that keeps it going. If you're sleep deprived and you're chronically depressed and stressed and turn to substance use, and substance use is a big part of this too, then it's a vicious cycle that makes it worse.

So how do you untangle all that? So you turn it around in the other direction. You could treat the disease drivers, the infection, or other things. But if that happened and it's been going on for a while, it's done a certain amount of irreparable damage that cannot be reversed.

But some of it is active disease process, some is prior damage that's there. And then what can you do to make the immune system healthier? So it's helping you to adapt instead of having maladaptive immune system even know that you can go in a lot of details of which immune transmitters and all that.

And then looking at the symptoms. So I think working in those three areas and in different people, it's different things. Of what you would use in it and what perpetuates it.

Okay. Right. Do you sometimes do the you know the genome mind. You said, because you said basically the big drivers you're refining what kind of infections toxins with genetic variants and a lot of these cases.

And in some cases you're also seeing in some cases these people can't methylated. So you give them a necessary it's not effective because they're not methylated up in the CNS.

I mean, you do you find some of these genetic tests like genome bind are helpful in your particular case to like look at this at the same time. Not that one, but this new one that they, that that's being done that's a much more sophisticated testing.

So a lot of that really just shows are your rapid or slow metabolize or sort of. Right. When people think that that means use this antidepressant, but not that one, it doesn't mean that at all.

So I think those are not very useful at all. But I think this, this other testing that is, Houseman Cohen that she's doing, I think that's useful. And I think that's something that she's working on with this new testing, where it's what happens is when you get.

The illness, let's say somebody gets depressed. And now then we treat them. We give the antidepressant, it works on the receptor an hour after they take it.

But they don't get better for a few weeks. Why is it take so long? And what you're seeing is that these transmitters, these genes are upregulated and downregulated.

That's a key. So what she's it's Sharon has been Cohen it thinking what she's doing is looking at some of those pieces there and how people have different genetic susceptibilities that go into that.

Looking at the genetic sequence of how that process occurs. And that can give insight into how to treat it, you

know, in a metabolic way.

Homicidality, Bartonella, and Complex Cases

And I think that's also being done in a diagnostic way with Patterson's work where he's looking at, he's looking at the genetic markers or the, the nor the, immune transmitter markers.

That has to have to do with the pathological cascade. I think that's the gene part that we have to look at, rather than these other things that really don't give that kind of information.

Yeah. We're you know, we use Bruce's panel from Radiance Diagnostics quite a bit. I mean, I get him back a few times a week and the chemokines and cytokines that show up there, we're seeing a lot of vascular inflammation with VGG and SDC.

Oh 40 but the problem is and I've spoken to him about it, the VGG is the vascular endothelial growth factor can be seen from the spike protein from Covid causing vascular inflammation.

But it's an indirect marker of Bart. And I said to Bruce, how do you know it's the spike protein versus Bart versus both? And he said, well, we don't at this point.

We've really got to look at it. I suspect when they look at these long Covid cases, because I did an image review and I just published it this year in April in Microorganisms 2024, we look at all 16 points on long Covid and found every one of the factors I've used to diagnose and treat Lyme has now shown up in long Covid.

It's also shown up in autism. It's also showing up in ADHD. It's showing up in Alzheimer's. We're finding these it's like rivers of inflammation causing an ocean of inflammation.

And that the inflammation coming from infections and toxins and microbiome issues and sleep disorders, vitamin mineral deficiencies. And that has downstream effects with like the mitochondrial dysfunction neurosis symptoms autoimmunity, immune dysfunction Pops disorder, Nami, a liver dysfunction pain right.

It's part of the cascade of chronic illness. And like for instance, if I look I did a study looking at different site symptoms of depression, bipolar and interleukin six was in look and six was elevated and all of them now within each subcategory there were different, cytokines.

But interleukin six was seen in all of them. So sometimes you get a they're a common denominator with all these things. But then when you look at the details, sometimes you see a little bit of a difference from anxiety or depression or autism.

So there are other transmitters that are different. But it's it all makes sense. And a lot of the transmitters like the that upregulate and down regulate the genes that upregulate and regulate from health versus illness versus recovery. Our immune system genes more so the neurotransmitter genes in the brain, right.

So so networks in the brain, the immune system and the neurotransmitters. And they both come to be done. When you're dealing with this, when you're dealing essentially and it's inflammation in the brain, are you finding that things like low dose now tricks on low dose melatonin to block, neuroinflammation at the level of microglial activation?

I know you've used namenda in the past for NMDA. What what do you like apart from using the standard SSRI and you know, appropriate on what are the alternative things you find useful in these patients?

Well, there's always something that works for somebody and doesn't work for somebody else, because I think a key thing is you can't lump all these people in one box.

There's I think a standard of care is all treatment has to be individualized. Okay. Everybody's different. And when

you do formal studies it's aggregate data.

We don't treat aggregate data. No aggregate data has ever walked into my office. I treat individuals so. And if I know what worked for their identical twin, that doesn't mean it works for them.

Okay. Right. So and then you. So you have to make that jump. And people that are in academia think of aggregate data. We treat patients. We treat individual patients that are very individual.

And you can't say that they fall on a box, a computer menu. They're all individual and they need to be seen that way. Now I think what helps the most, and usually the number one complaint is the fatigue.

And that's the most disabling that a lot of people have. And when I think of fatigue, the first thing I start with is get more restorative sleep. And lack of restorative sleep also makes someone more in a proinflammatory state, although there's many other things.

But when you're in an inflammatory state, it interferes with the quality of sleep. So it's a vicious cycle. But I'll I'll go through all my symptoms. And I just did it today with somebody.

And then at the end I'll say, you know, when I go through my 270 symptoms, if I could help one symptom, what would help you the most? What's your worst symptom?

And it can be different. Even though fatigue or non restorative sleep is a common thing, it's not the only thing. It's like what is most troubling to them.

And then we look at starting with that and working our way down the list. And if you're in a chronic stress state that pushes think of stress syndrome versus sickness syndrome.

And people that don't do well with Lyme are people that are are, too hard driving and they just can't stop and they can't back off.

Inflammation, Toxins, and Genetic Susceptibility

They're and if you could, when you're in stress syndrome, all your energy goes towards dealing with your environment. When you're in sickness syndrome, your energy goes more towards dealing with recovery.

You need to get in that recovery mode and allow your body to heal. Right. And sickness syndrome for those listening is what you get with the flu. What you get with with first timers, these are like NF kappa B turns on.

You get and you get TNF alpha, IL one iota, IL six. Right. So it's these cytokines that cause inflammation that make you say, I want to stay in bed, right?

I'm achy. I'm tired, I'm foggy. Your body says, so that's the sickness syndrome, right? Just for people listening. Right. The person there then who says, okay, I came down with the bug and I just curl up in a ball, sleep, take it easy.

That person then recovers better, whereas the person says, I'm not going to give in to this, right? I'm going to fight. I'm going to push. I'm not going to be weak and give in to it.

And that person then never recovers because they don't. They can't let themself regress and shift into sickness and room to recover and heal. Okay. And you often see the people that and it's often the movers and shakers that get the lie because they're more active.

And those people often have that quality of being push hard, drive forward, you know, don't give in. And that's it, a trait that interferes with the recovery.

Right. And you taught me years ago to never. Yeah. And you taught me years ago with non restorative sleep that people just don't respond to things like ambulance to sonata that you've got to use specific drugs for, like the phase three trace for REM right to get them in.

Well, go to sleep. Yeah, yeah. So why don't you just mention a little bit for people listening? Because I think this is important because it's part of it.

Why would you think about things like de Seroquel or, low dose REM or on like why you decide to use some of these instead of the classic sleep drugs for the non restorative sleep?

Well, just about all the FDA approved sleep aids are approved because they help onset be shorter and duration of sleep be longer, but they do not improve quality of sleep.

The only FDA approved drugs that do improve quality sleep are the narcolepsy drugs okay. The sodium oxybate drugs that do improve now sleep the you have usually about four sleep cycles.

The first two are so way down to sleep cycles. And then you have REM. So it's the delta sleep cycle that really boosts your immune system. And those are the first two cycles of the night.

So you want meds that help promote Delta sleep. And those are some of the meds that are approved for other things like we think it tries it on, gabapentin, Seroquel.

Those do have that ability to improve down to sleep. And that is often critical for recovery and healing. Now REM sleep is then the next half of the night that's more significant for psychological recovery.

So that's where there's memory reorganization. Now some people have more delta sleep deficiency, other people REM sleep deficiency, some people both. So you're looking at where is your problem and how do we want to impact sleep to make it more restorative both physiologically and and psychologically.

So if let's say it's someone who has nightmares from post-traumatic stress that affects more of the REM sleep. So there we get things that reduce the intrusive symptoms that reduce the nightmares.

So then they they're not tortured when they get the REM sleep, or they're not afraid of sleep because they know that they're going to have distressing dreams.

When we block that, then they can they can rest better, and then they're more comfortable with sleeping. Right. So so just for example. Yeah. So just for example, for the audience listening, just give them some examples of the drugs and dosages that you might use.

Again for these just so, so people listening. Well I think, I think with all psych meds, here's what I think happens. Yeah. For whatever reason, a lot of the time patients are very drug sensitive.

Now, it may be because you get a low body temperature, and a lot of the time patients have low body temperature. And when your body temperature is 97 rather than 98.6, you need lower doses of meds.

But for but there may be other reasons too. So a lot of times with Lyme you want to start off them with a fraction of the lowest dose. Now are we know someone has normal tolerance, but a lot of times people think that they're intolerant to something.

When we always talk to too big of a dose initially. So it's often good to start with the a fraction of the lowest dose. And if let's say it wasn't strong enough, then you go higher, but then you realize, are you really intolerant or you're just very dose sensitive?

A lot of people have okay, so you talk. You're talking like reamer on 7.5 or even. Or less or less. Or even less instead of 15, 30, 45. REM on 7.5, right?

An eight ounce bottle water and have one ounce a night. So it's one milligram, right? Or you could go low by making a compounded, just like we did I for him.

There's some people that need five milligrams or rather than, you know, the 250 milligram tablet comes in or tries it on, we would start that comes as a 50.

That's the lowest dose and tries it on is a good sleep. It's not addictive. It doesn't have the weight gain and it does promote down to sleep. So that's a reasonable one to start with.

And it's cheap okay. So a lot of times you'd start with 50. But you may if someone's drug sensitive you may take a fraction of it. It does help onset in about 40 minutes.

And then it helps quality of sleep. And then when someone first starts it they may get a bit of a drug hangover for a few days because they're sleeping up, but catching up on a sleep deficit.

And then that works through. If I say they consistently find I get a three hour hangover in the morning, then I'll say we'll take part in the dose three hours before bedtime.

The other part at bedtime. And that way it wears off better and you have less hangover in the morning, right? Or if it's two hours, you do it accordingly.

Okay. Right. Do you like do you also like very low dose stocks have been I know it has a long half life, but do you find sometimes with mast cell it has a very strong antihistamine effect.

And it it also can be useful in some of these people. Right. Just like I find pregabalin Lyrica I fortunately can use that with methylene blue. I can't use any of the other drugs except for gabapentin.

But you like those. Also, I like both them. Like the dogs have been. I have been comes as a three and a six and sleep aid, but it's more pricey. It comes as a ten as a capsule, but you can open it up.

Dogs happen, you know, it's there's a saying the old the the young physician uses ten drugs to treat one condition, and the older physician uses one drug to treat ten conditions.

Let's talk about Doc's opinion that regard. It does help a deep sleep. It's also wonderful for GI distress for people that have, GI spasm. And a lot of Lyme patients have that.

It improves GI motility somehow. It helps nervous stomach. It helps irritable bowel okay. It also helps anxiety. It helps depression.

Sleep, Fatigue, and Symptom Management

It acts as an antacid. So it helps reflux. And so it if you get a lot of benefit and improves the sleep, so you get a lot of benefit and often you don't need to go very high.

Now usually with like GI spasm, irritable bowel, nervous stomach I'm usually looking at maybe ten, sometimes starting lower. And sometimes you say we'll start with the ten.

Open up the capsule and take a little bit at first. Work your way up. 30mg is often a common dose that works for GI spasm, where it's like the pacemaker.

You have a pacemaker in your heart. But here we're talking about the pacemaker maker. Do you gi tract right. And sometimes more sometimes. I've been as high as, 400mg for docs in some people.

And a normal antidepressant dose is 75 to 150, but we're looking at ten to 20 to 30, sometimes 40, as the usual dose for the GI benefit or and the sleep benefit is 3 to 6.

It can be quite low. So it's a very different dosing. It's a microdosing compared to what we would give for depression. Right, right. So so again the kind of list for people listening for those who have these problems with sleep disorders, which is pretty much every line patient.

We're looking at other drugs like trazodone, doc sippin lyrica, pregabalin, very low dose tremor on even down to 3.75 or less that a lot of these can be useful.

I even find sometimes flex rule. I don't use a lot of it, but I do use sometimes like five milligrams. For those people that keep waking up in the middle of the night because it has a long half life, right?

Well, flex rule is very close to the doc's have been or amitriptyline Ellisville. It's a tri cyclic, although it doesn't have the antidepressant properties, has more muscle relaxant properties and they're anticholinergic, which if you go to higher dose for those then it can slow down the GI tract, maybe too much, but the low dose helps the motility because it reduces spasm.

Very high is it is reducing motility. But you're usually not going that high with the docs or any of those. Yeah. No I found but I've used your kind of dosing regimens over the years and found that if I use very low doses of this I found that it's generally quite helpful.

But you're right. I mean it's a big problem talking about non restorative sleep, because when you don't sleep you keep getting inflammation. The inflammation is driving all the underlying Lyme symptom.

So this discussion is particularly relevant because even that will increase all your psych symptoms. Right. Just not getting to that. That's example. Like the person said before who stoic who push push push.

Ignore your internal body signals. Do what you have to do. Do what you need to do. Don't give in to your weakness inside. That's what you don't want to do.

And people with that personality make up really do very poorly with Lyme disease, right? But have you found that any of these newer techniques, a lot of people that we see do have trauma, either PTSD from going to, you know, ten, 20, 30 doctors telling of it's in their head, or have had emotional, physical, sexual trauma early on.

Do you find that some of these newer techniques that are out there, like some of the limbic retraining, that's going on, or any of the, you know, the vagal devices out there, are you finding are you using those in your practice? Are you finding them helpful a little?

Well, to some degree, here's what I think the role with trauma is. And you can think of adverse childhood events. I did an article on this. And in some ways trauma is like autoimmune disease, where you get trauma and ideally you learn that this is dangerous.

Stay away from it. And now I'm okay. So now you've adapted to environmental danger. Immune disease is where you get an internal sign of something. And and your immune system learns to stay away from it.

So if your immune system goes wrong, you get autoimmune disease and inflammation rather than adaptive immunity. If it's environmental, you get post-traumatic stress instead of learning what's safe and what state dangerous.

Okay, now a lot of people are traumatized from having Lyme because of getting lost in a system they don't understand the people that they interface with don't understand it.

The healthcare system doesn't understand that they're traumatized by it. And people say, you know, it's all in your head. It's the aches and pains of daily living for yourself.

Up by his bootstraps and just pushing. You're fine. And you had you had one dose of doxycycline when you got infected. So you should be fine or you had one month and that should do it.

That's what it says right here. See it in the book. See, I read this here. Somebody wrote this. So that should happen to you. And, you know, and they get traumatized by that.

And, but and the illness is traumatic even if people around them understand it. But it also there's a physiology to it. It gives intrusive symptoms and intrusive symptoms, fuels post-traumatic stress.

Trauma and post-traumatic stress aren't always the same. So there's something about the physiology, how it affects the temporal lobe. The people get these intrusive symptoms that go with Lyme disease and that fuels PTSD.

That's the key thing. You get the intrusive symptoms. And that leads to avoidance hyper rules on emotional numbing, which are the three major symptom clusters of PTSD.

And, then so when you understand that now, I think that Npdr I think can be see, it's interesting you when you do a rhythmic activity, it seems like you somehow process it better.

And that's the logic within eMDR. So what I think it when you don't what you don't want to do is think about these things. When you're lying in bed at night in a dark room doing nothing because you're disempowered, but you're you're not doing anything that's empowering, but you're thinking disempowering thoughts.

If you think those same things when you're walking on the beach during the day, you you have more mastery over them and you can process those thoughts.

There's a difference between a bad memory and a traumatic memory. A bad memory is something upsetting that you've processed, and you understand a traumatic memory is something that haunts you, that you haven't been able to process and understand.

In some ways, it's like tipping an iceberg. You chip away what's on the surface, and more keeps coming, and you don't want to do too much too fast. It's overwhelming and flooding, but you want to do it.

And sometimes when it's too much, you want to just leave it there. Like people that are Holocaust survivors don't go there. It isn't worth processing at all.

Okay? It's too much. Okay. That's one option to do that. And just don't go there. Don't over open a Pandora's box. Or if it is within reason, you process a little bit of time and it makes sense.

And the greatest trauma is trauma of trust, a betrayal of trust. If you're traumatized by a hurricane, you can better deal with that, because I know it's not hurricane season.

I know I'm safe. Okay? And when it is hurricane season, I'm going to get away from the shore. But if you're trauma of trust, you can't escape. It's like I trusted someone and they betrayed me.

And all day long I have to make trust decisions with people. And now I don't know who to trust, how far and what way. I'm lost. And now I keep getting retraumatized.

And every time I have to make a trust decision, it triggers my old issues with trust. And now I'm lost now. So what do you do? These people are very, very resistant.

I mean, I've seen them myself. Have you had to refer them sometimes for some of the newer psychedelic therapies? No, no, no, that that can backfire. I can reduce the intrusive symptoms.

And we think of like topiramate topamax and frozen. Those two meds seem to reduce intrusive symptoms and sometimes, poorly reactant can. And so how do they work that way.

It's like why does that one blood pressure med do it and others don't. But that's what studies have shown. And then

when you have less of the intrusive symptoms, you have control over what you can access and it doesn't flood you and overwhelm you.

And then it's more manageable. Then you can look at it in a controlled way, make sense out of it and understand it and develop skill. And that way you're not lost with the numbness, the hyper arousal.

See, if you always have to be hyper, how are you ever going to recover. All right. And we do. So you look at the same doses of topamax. I used for migraines like 100mg.

Is that enough for some. To start low? Now the problem with that, the topamax can cause brain fog. Lyme patients always have brain fog. But I started in the evening and I give it an evening, and that's usually when it's more a problem.

And it also reduces carbohydrate cravings. So it helps with people the carbohydrate craving for weight gain okay. It also reduces alcohol craving. So it's you don't want to get some of these kidney stones or glaucoma.

But then you start at night and then often they develop a tolerance to it because the intrusiveness is worse at night. But then once they acclimate to it, then you can give it during the day and they may tolerate it better.

Now, if the other one would lower blood pressure, and if someone has orthostatic hypotension, then that might be a problem. Okay, so it depends on on what's which one works better for them.

Which one they tolerate better. Right. And then the poor reaction might cause weight gain. It's an antihistamine that you may want to give. As someone who has more on occasion crawling under the skin or itching, you know, in that, or if they have mast cell activation because that's an antihistamine and that can like, you know, you're trying to help is more than one symptom with any med you give because there's so many different symptoms where you start.

So you're trying to think which one works for the symptoms that you have and which one do you tolerate best. And a lot of times you negotiated like what what what side effects are you more okay with or less okay with?

Okay. So so basically what you're saying is, I mean, apart from individualized medicine being, of course, the hallmark of what all of us do these days, you're saying and a lot of these patients start low, start slow and and slowly go up because of the tolerance and the sensitivity that a lot of these patients have.

A lot of times you give too high a dose, a person has a lousy side effect, and now they become afraid of it and don't want to touch it again, when really, that could have been very helpful.

But they started it too high a dose. And sometimes I revisit something that someone said they failed at, that they really failed because they had too high a dose.

Now, occasionally I run into someone who needs a high dose of things, but I'll get there gradually. Right. It may be a rapid metabolize or I do have a couple of those people.

See it's on a bell curve. And if you look at psych meds there can be 100 fold difference of people on one end and bell curve at the other end. Now when you get an FDA approval for a drug, you aim for the middle of the bell curve for aggregate data.

But we treat people at either end of the bell curve. Most of our line patients on that lower end of the bell curve with the psych meds, they might be on the higher end of the bell curve with antibiotics, the lower end with the psych meds. Right.

Trauma, PTSD, and Intrusive Symptoms

And by the way, do. You see, Bob? I don't know how much experience you've had specifically with Daptone. I know disulfide, you've had some. Do you see?

Because I've seen the neuropsychiatric symptoms get better after the infections you're treated and the inflammation is lowered. Have you seen that you've been able to get some of these people off some of their psych drugs once you've used the biofilm treatments?

Yes, I've seen that. I've seen more. And even if I don't get them off and they're on less stable, you have inadequately treated psychiatric illness. It ends up being a degenerative brain disorder.

Okay. Think it can begin with things, insomnia, anxiety, depression, dementia. And it can progress over decades. So if you treat it, you help reduce that progression over time.

And then. But if there some damage that occurred. So if someone, let's say was infected with Lyme and when ten years and now you're treating this major psychiatric illness, it's hard to just give an antibiotic and they're back to square one, you know, because they've had ten years of disease progression that you can't reverse.

You can reverse the current disease activity that is part of the symptoms that are present. But you can't undo the neurological dysfunction of the harm that's already been done to their neural circuitry.

Right. So there's a limit to how just like treating Alzheimer's after they've had it for five years, you're you may prevent prevent it from getting worse in the future and help some of the current symptoms.

But you're not going to turn the clock backwards to where they were before it began, right? And that's why I was asking about some of these newer techniques that are out there for the very resistant symptoms, because, you know, you read about Hopkins doing some of the studies of psychedelics.

I've read it where all of a sudden resistant depression and stuff gets better. Or people that do certain drips to dissociate, right, with ketamine. But you're finding that even though I read about these, you're finding in your clinical practice, it's not it's not the answer for some of the big resistant.

Here's the thing, particularly when in post-traumatic stress, you have to be careful. A number of years ago, they had these, like, encounter groups or so where the way would work is, hey, let's have a therapy.

We can and we're going to get together and we're going to have nonstop psychotherapy. Let it all hang out, tell your deepest, darkest secret, and that people would end up in suicide.

What would happen would be it was too much, too fast. And that's not good. You want to do a little bit at a time. You want to open up that box and talk about it and close the box up on command.

You don't want it to flood you. And then once it's out of the box and you're overwhelmed with all your old traumas that are hitting you at once, it's like the movie, the scene from Ghostbusters.

If, remember movie Ghostbusters, they have the box and they open it up and all the spooks come flying out. That's what you don't want, okay? You want to let out one spook at a time, and we make sense out of it.

And now once we wrap that up in a nice package and we understand it, then we open up the box and close the box and do one spook at a time, okay? I mean, not the whole army of them coming all at once.

So I think anything you do, you don't want to be and you don't want to be too aggressive with it. Better you do it too slow than too fast. And that way a person can acclimate to it, learn to adapt to it, and it's not flooding and overwhelming.

And then they get stuck and they're traumatized by the therapeutic process. Now with the psychedelics, they can go either way. It's kind of like, yeah, there's parts of it that may help, but parts of it that may not and it's it is experimental.

And I think it's good to see it in the experimental realm. And, there are some times when you get bad outcomes

from it. You know, I've seen that with ketamine and, you know, it's, it can go either way.

Yes. It's it's hard. The complexity is it's humbling, the complexity that we deal with, with these things. So we have to be careful about the potential downside that is individualized.

Yes. So Bob, we're getting to almost an hour of speaking here. So question people are going to probably want to contact you to have questions. They may of course want canceled.

What what is the best way for people to get in touch with you? Ask their doctor to get in touch with me and their psychiatrist to get on my list. Because listen, my my office staff here is traumatized by all these phone calls, okay?

And I'd like to be able to help everybody. But at this point, we really have to train more people like you have to train more people. And we're trying to do it as best we can.

Because, you know, I think these are basic things that doctors can do. I've been working on a training module for and I'm not sure what we're meant to be, but it's over 500 slides right now about Nora Sykes, Lyme disease, and breaking it down.

And it's not all 500 PowerPoint slides at once, but it's broken down into about a dozen different sections. And we're trying to think of a venue to do that as a CMMi program.

And I think, you know, what's good is if, they could get their doctor and their psychiatrist someone with an open mind and wants to learn more, and then they contact me and I put them on my list and they can learn it.

And then when I get all these phone calls, then I have more people that I can send these patients to. But there's just too this affects too many people.

It's it's not a small thing. This has a massive impact. And I you know, people are gradually becoming more aware. But we have to recruit the people that treat this and not feel that they can send everybody to you or me.

No, we all have the same problems that we are. We're some of the pioneers on the front lines and have been doing this for a very long time. So and so in that case, the best way really to do it.

And of course I have a training program on my website. I train docs. Ilyich does it, but you're saying the best way is really to get their doctor to contact you, and then get some of the training that's needed?

Yeah. Okay. Good. Yes. Thank you. But that's the best way to do it. Right? Anything else we didn't cover today that you think would be important to share people before we before we sign off, or do you think we covered the big.

Experimental Treatments and Caution

Well, my current project isn't exactly lined, but I'm looking at, the impact of how infectious diseases, infectious diseases can cause mental impairments of different sorts.

It can cause autism, it can cause developmental disabilities. It can cause mental illness. That's what we're talking about today. In some people, it causes violence.

And, I'm looking at that whole issue with infectious disease and how it causes violence in some people. And it seems like in some parts of the world that's particularly significant.

Now, we're not talking about so much Lyme but other infections. And we find that there's parts of the world particularly you see more of this closer to the equator.

Now that's not where there's more Lyme disease Lyme is more in temperate regions. So we're looking now maybe other brella or maybe other parasites. But I think these hotspots of violence where violence is endemic and this is

the or I submitted this article and it's going to it's gone through peer review process now.

And my hypothesis was in 2017, if ever in the future we get a pandemic that causes mental impairments that manifest as violence, that could result in global instability.

That was what I said in 2017 to meeting Paris. Now we had the pandemic. Can we have more global instability? That hypothesis was proven to be correct.

And now I'm looking at that in more detail. How does that happen? And when you look at the you know, we have this we need mental health technology to catch up to weapon technology.

We need to look at these problems away. We look at airplane crashes, understand piece and prevent it from happening. So I think that infection not only causes all these problems with mental illness and disability and chronic illness and addiction problems, but it also contributes to violence.

And we're looking at other infections. We need to understand that. We need to see the dynamics, and we need to be able to figure out how to prevent it.

And I think that's that's what we're the it takes us and we need to go there with that. And it goes beyond Lyme disease Bradley Bergdorf right. And we have to look at this greater picture because this as well as Covid gives us insight that infections screw up, how our brain works.

And all these problems we have isn't part of our innate makeup. It's a part of some kind of disease process that harms are makeup. And if we didn't have that disease process, we'd have a lot happier, more productive, more peaceful world to live in. Yes.

Closing Thoughts on Infection and Mental Illness

And again, the point you're making, which is extremely important, of course, is microbes do cause mental illness. And a lot of this is from inflammation.

And the inflammation can come from bacteria, viruses, parasites, fungi. It can come from multiple sources. And we need to get to the underlying root causes of why people are sick and why they have mental illness and just, just not just throw drugs at them.

And that's ultimately what this personalized precision medicine. Model. And it's poor more the mental illness it causes chronic illness. It causes, behavior problems.

It causes developmental problems, it causes addiction. It causes other things. And although throwing drugs helps in the downstream effects better, we treat it than never treated.

But it's good to work our way backwards and look at how it began in the first place. It's like a row of dominoes and we're treating one of the last dominoes.

It would be better if we could treat the first domino, but we want to treat every domino we can and understand how that disease process occurs. And we have to connect the dots and, and go backwards.

And I think if we can, we can really get a lot accomplished. Yes. But Bob, I want to thank you for taking your time. That was really it's a great talk.

And again, for those of you who've been listening, my name is Doctor Richard Horowitz. I'm the co-host of the Doctor Hawk Healing from Lyme Summit, 2.0.

I've been with Doctor Robert Bradfield, one of the world's experts on neuropsychiatric, Lyme and tick borne. Bob, thank you again for joining us today.

And for those of you who've been listening, we hope to see you again for another episode soon. Thank you. Thank you Richard, and I'm happy you're doing this again.

Okay. Thanks. Bye. Thank you Bob, good seeing you.