Introduction to Dr. Ruscio

Welcome to another interview with the M. S. and Autoimmune Summit. And our next guest is Doctor Michael Ruscio who is a chiropractor in the naturopathic practitioner.

He's a researcher and a clinician. He serves as adjunct professor at the University of Bridgeport, and he's published numerous papers and scientific journals.

Michael founded the Ruscio Institute, a functional health, a consulting practice, a research clinic that helps patients with a wide variety of GI conditions.

He serves as the head of research rigorously testing complex GI disorders, as well as a relationship with thyroid health. From his clinical research experience.

He's authored a book, The Healthy Gut, Healthy U you yes thyroid Self-Management course, and developed the first over-the-counter, fully elemental diet formula on the market.

Now, in 2016, he started The Doctor, Ruscio radio podcast which frequently ranks in the top charts for alternative health podcasts. So let's welcome Doctor Ruscio Michael, let's get to this.

So tick borne illnesses, what are they and why do they matter to people with multiple sclerosis? Yeah. You know, this is something that, like I was saying just a second ago, I kind of wrote off early in my earlier in my career because the labs were so inconsistent.

But now that I've had personal experience with it, it's opened my eyes to these organisms that are not only spread by ticks, but also lice, biting flies.

Tick-Borne Illnesses and Neurological Symptoms

Cats can also be a carrier. And the really pernicious thing about these organisms, the big three are Lyme, which is Borrelia. People have heard of that.

But more common actually, even than than Borrelia. Lyme is a protozoa called the Busia, and also a different organism called Bartonella. Why they're so important, I think, for this conversation about brain and neurological health is they have a really high affinity for neurological tissue.

In fact, some studies have found I'm probably going to be silly off in the time interval, but within something like 30 minutes of being bit by whether it's, a biting fly, tic lice, whatever, they get into the brain and into the nervous tissue, they go right there.

So, I mean, the one thing I want to lead with for people who feel like they're doing so much for their health and especially their brain health, and they still have and this is a lot of this is me problems with sleep, even though they're not having caffeine late in the day, you know, they're they're doing all of the things right.

Healthy diet, lifestyle supplements. They still have problems with sleep or with brain fog, or with lability of mood, or with paresthesia or muscle twitching or cramping.

It's certainly possible that one of these organisms is what's driving those neurological symptoms. And, you know, some studies have found when looking at populations with symptoms.

So it's important to sort of disclose that. But 38% of people tested positive for one of these organisms that they had

chronic non-responsive symptoms.

So again, for our listeners, of course, many of them have a wide variety of neurologic symptoms. And how would they begin to get this sorted out? I think a really nice starting point is this, this wonderful questionnaire by Richard Horowitz called the message 38.

Miss ID is 38. You can find it online very easily. It gives you a quantification of risk based upon your symptoms. Because the challenge I think a lot of people are struggling with is you look up your symptoms and you come up with thyroid toxicity, adrenal gut.

Right. Like all the things flag. So having a questionnaire that takes all of these symptoms and quantifies them low, moderate or high risk I think is a wonderful starting point.

But again, for our listeners, what is that survey? Yeah, it's called the message. Ms.. Ideas 38. And the people Google that it's very easy to find and to fill out online.

Okay. So we go we saw that out online I get a a score as either low moderate or high. What's the next step.

Screening, Testing, and Die-Off Reactions

Well the next step is I mean, it kind of depends on the person to do a good screening. Here you're looking at at least about $1,300. So it's not a ton of money.

But for some people they'd rather just do an empiric trial on, let's say, herbal antimicrobial therapy. So you can do one of two things. One, you can do testing, I Genex and T labs.

I think are two of the better labs here. Or you can do a trial on some herbals and see if you have die off because you know, the die off symptoms of boy I took let's say oregano, clove and artemisia.

And this would had kind of both sides. And we can come back to the organisms and in particular in a moment. But that would hit both sides of, of the bacteria and protozoa.

And if you had flulike feelings for a few days, headaches, fatigue, brain fog, depression, then that gives you sort of an indirect diagnosis, if you will.

So our listeners may not know what die off is. Again, have them understand that you totally. This is when you use some sort of agent that's cement to kill things.

So oregano, garlic, artemisia which is a derivative of wormwood. Instead of feeling better, you feel worse like you have the flu, head pressure, fatigue, brain fog, depression, maybe joint pain.

And the tough thing about that is some people will just conclude, oh, I'm having a negative reaction now. I'm having an allergic or a pseudo allergic reaction and reaction.

There's no reaction to the supplement. And so like okay, that supplement doesn't agree with me. So I have to stop that. But your time in this was yep.

And this was for me personally hard to wrap my head around. Like I had pretty severe they call it neuro herkes, where I had a week of being totally debilitated, just sat in the couch, kind of like, what?

This had just feeling I had really bad flu and depression, crying spells. I mean, it was it was rough in it. It took me a while. I stopped and I said, oh, you know, this isn't good.

This isn't working. And I had to learn more about, again, these bugs get into your nervous system and they can really screw up, for lack of a more medical term, with inflammation.

And once you start attacking them, all of a sudden the microglia, the astrocytes, they really start activating. And it can be bumpy for some people. And that's like like you said, it's a key thing that people don't incorrectly confuse die off, which is ultimately going to be good with, oh, my body just didn't like that.

And I also understand that, let's say if brain fog and fatigue are two of your primary symptoms and those get worse, pulling back and saying, well, boy, I'm not going to do any more of that because it clearly wasn't the right thing.

So as I'm listening to this, I'm thinking for our listeners, what's going to really help us to find a clinician who knows how to treat these tick borne illnesses, to help evaluate, to help guide what might be herbal strategies to kill these organisms, and help you navigate how to begin the herbal supplements and manage the day of symptoms.

Yes, absolutely. I mean, it can be really disconcerting when you have these symptoms. And even as a clinician myself, it was it was challenging for me, because it's one thing for a clinician to say, you may have some die off.

It's another thing to feel like I was saying a second ago, fully debilitated for a week or so. And when you're in the throes of that, it's kind of like the sky is falling and you panic.

So that's I agree strongly that a clinician to guide you is really important, is critical.

Herbal Treatment Strategies and Microbiome Impact

And so how long might it might this die off? You know, subjective worsening of my neurologic symptoms last. Well, I look at this in sort of three buckets.

The best is people who just improve my there's no die off and then go, boy. A few days later, better mental clarity, better sleep, what have you. That's the best case scenario.

Medium moderate case scenario would be I feel kind of crappy for two, three, four days. Then that negative reaction abates and I start feeling better.

The third, the most challenging is people who just they have die off and they revert back to baseline, and then weeks later they may have more die off and part of this is because these organisms can form biofilms and sort of hide in these protected colonies, where they're somewhat inactive.

And if you're treating appropriately, those biofilms get opened up. And so it might be a month in the treatment. And then all of a sudden you open a biofilm and you have this regression of die off for another few days to a week.

So that's the more challenging case scenario where there's multiple intervals of die off along their road, which might last for on and off for even a few months.

Oh boy, that sounds challenging. Yeah. And that was actually me. And that's that's why I was so eager to kind of share this because and sorry, you know, keep bringing my personal story here.

But I've, you know, I think we've both learned so much from our own personal experience. I kind of kept pulling back. And then I would do other things that were palliative.

I would use peptides or sauna or mitochondrial supports or cognitive supports, and I'd get a little bit of improvement. But I felt like I had to work really hard to kind of be at normal, and it was really addressing these bugs, even though it was a dicey, tumultuous, bumpy road that allowed me to finally get to a point where I didn't feel like I had to work so hard just to maintain normal function well.

So when you got started, did you go through the this more comprehensive diagnostics with Hygin X or. I did, yeah. And I came back positive for the year and Bartonella and especially with Bartonella, that organism is really known to present with a predominance of neurological symptoms.

So, you know, especially and this has been such a gift at the clinic, in a way, if you're seeing someone like we often do, who has a lot of symptoms, some digestive but many more neurological, that's when I'm really thinking one of these bugs, and in particular Bartonella.

Okay. So you do the diagnostics and we could go the conventional route and take some prescription pharmacologic drugs. And I assume if you went down that route, we're going to have again die of problems and likely more microbiome problems.

And this is another layer that complicates things in that I think a subgroup of people have a preexisting predisposition toward fungal overgrowth, and that can really murky the waters.

Kind of like you're alluding to that you might be solving one problem, bacterial in nature and exacerbating another, which is why I really like starting, at least with the herbals.

If you're going to do the pharmaceutically antibiotics, you can just really fortify with higher doses of probiotics and other agents, herbals included, or pharmaceutical that are antifungal.

But I do think you want to try to get someone's gut healthy first, or at least as best you can before you then go into, if you're going to do antibiotics, the antibiotic therapy.

And if you are not doing the antibiotics, but we're going to go the herbal route. And you mentioned oregano, clove, you know, the mesure or wormwood. Can you walk me through what impact that has on the microbiome?

This is one of the nice things about herbal medicines using, let's say, artemisia as an example. It's anti-protest. Well, so one of the organisms, babka, is a protozoa.

But Artemisia is also anti-fungal. So this is why I like the the herbals. Now garlic is also antifungal and antibacterial.

Treatment Duration, Relapse, and Immune Support

So if you're thinking someone has Borrelia or Bartonella, garlic can hit both fungus. And one of those bacteria. And I think you mentioned also yeah. Oregano.

So oregano clove and garlic antibacterial. And they're actually all also antifungal, which is another reason why I really like the, the herbals to paint sort of a heuristic.

They call them the big three. So on one side you have a Busia that's a protozoa. It's a little more advanced than a bacteria. And on the other side you have Borrelia and Bartonella.

Those are bacteria. The agents that you use are a little bit different for each. So with pharmaceuticals it's a lot of the anti-malarial drugs like Defend Tarquin Macron, a Tova clone that are going to hit the Busia, and things like Artemisia Sida.

A cornea is another one. Hu tuna is another. These all are anti protozoa worm. What is well acknowledged to be an antimalarial herb. And then on the other side, if you're thinking Borrelia or Bartonella you have the clone the garlic.

The original methylene blue is also pretty interesting for Bartonella also. So that's how we can build a plan for someone that's going to hit both sides of this protozoa in bacterial, you know, ledger, if you will, a different organisms.

And so, ideally you do this diagnostic workup to know which organism or probably multiple organisms is fairly common. I think it's about 40% from one survey that found people will have two organisms.

Yeah. So it's not uncommon. And let's say you finally get cleared about all of the stuff. Are you at risk to be reinfected then what do, how do we deal with that?

Yeah. So there's this a syndrome known as PTSD post treatment, Lyme disease syndrome, where people will see some improvement, but not total resolution.

Which is why I think in these situations, you really want to over treat rather than under treat the gut. I found to be a little bit different where the minimal effective intervention is usually best.

But the gut bacteria are different in the sense that they're not so savvy at evading the immune system. Whereas these organisms are so looking at someone's history, if you know, if it's a long, prolonged gated history, once they get to a point where they feel substantially better, we'll usually use a longer term, lower dose antimicrobial therapy just to be on the safe side and look to do other things that would really fortify their immune system, one of which is being a little bit cognizant about really high intensity exercise.

And I'm not saying not to exercise, but what I would say and Joseph, personal talks about this high intensity cardio is going to be one of the most taxing for the immune system.

So, you know, if you look at a lot of the discussion about having a good VO2 max, meaning really intense cardio can improve this VO2 max that does correlate with longevity.

But in this cohort, we want to be thinking about exercise in such a way that's not going to compromise the immune system. So optimizing for video to max would be antithetical to having a really strong immune system.

And so that's where they can still do some. But we want to be a little more bridled with adequate rest and not doing lots of prolonged high intensity cardio.

Okay. Strokes. Strains. Okay. The most important concept is just having adequate rest so you can do intense spurts, but you want to rest as opposed to, let's say you're doing like a 45 minute high intensity, you know, bike ride or run or something like that.

Those are the things that you really want to save until later on down the road, until we've really gotten a lot of headway, established. Okay. I'm going to go back to the beginning.

We we have someone who has completed the Ms. Ideas 38 questionnaire. I have, I, I have a high risk score. How do I find someone who could help me? The eyelids foundation, through which I've been trained, to international Lyme and associated disease Foundation.

I think they're doing a really good job with, kind of pioneering a more, contemporary perspective on these organisms. There's another big body, which is the IDSA Infectious Disease Society of America.

They're much more kind of conventional medicine. Well, if you have Lyme or one of these bacteria, all you need is maybe a month of doxy cycling. And if it's, you know, if you have symptoms persisting beyond that, it's all in your head.

Depending on how your doctor is trained, you're going to get a very different experience. And so you can go to the islands directory and look up providers through there.

That would be a great place to start, because it is important that you have someone who's who's going to be able to field this appropriately. Okay. So are there regions of the country that increase the risk or have minimal risk?

Finding a Lyme-Literate Clinician

Absolutely. The northwest, I'm sorry, the northeast is known to be the most endemic, but you also do see in the northwest some regions where these bugs are picked up also.

But a history can go really far. Where did they grow up? Where had they lived? If you see northeast, that's the most endemic. And there's also some signal in the northwest.

How about so I'm here in Iowa. Do we have too much of those who are in the middle of the country? Not as much, but I still wouldn't rule it out. I mean, you know, these things just kind of create a mosaic of risk.

So I would look at where they live, their symptoms, their history. Maybe they took an antibiotic for a tooth infection. Let's say they did a course of a months or so on or minocycline or what have you.

And they said, you know what, I felt better after that. Then, you know, all these things sort of help paint a picture so local gives you some risk. But I wouldn't say we can totally rule in or rule out based upon where somebody lives.

Yeah. You know, again, for the listeners, I'm thinking about my daughter. So we we were still living in Wisconsin at the time, camping a lot. Yeah. And, you know, I think she was probably eight, seven.

And I'm looking at her and I realize it's, I think you have a target lesion. So I took a picture of that called, got a pediatric appointment, took a couple days.

So I had several pictures of the evolving erythema, migraines. It's a, you know, she's got Lyme disease. And the resident said, I think you're right. So it certainly can happen and not everyone's going to get the bullseye lesion got.

I have you describe that in talk a little bit about that for our listeners. Yeah. And you know it's funny you mention that because I grew up in Massachusetts and I couldn't live in Texas, but I have a niece and nephew in Massachusetts still.

And my nephew was recently diagnosed with Tourette's, and my niece has had some pretty major retinal issues. And so we screened them and they came back both with Borrelia, Lyme and Busia.

So, you know, I do think there's there's, a fair amount that's overlooked. And one of the instructors for, I'll add, shared a stat along the lines of, in his opinion, with a fairly large psych clinic, about 50% of pediatric neurological, conditions and the infectious and etiologies for for kiddos.

I think it's it's really important to do screenings when there's these brain symptoms of no known cause. And I look at something like Tourette's, I'm certainly not an expert there, but I look at that more as a cluster of symptoms.

Rather than telling us why the Tourette's is there to begin with and to your to your comment using my niece and nephew as case studies, they never had any worrisome migraines.

Bullseye. Sort of rash. So it is possible for someone and nor did I ever remember having something like that. So, you know, not all these organisms seem to produce, that very characteristic bullseye rash.

Yeah. You know, I, had a tick bite recently as well last year. And what was remarkable, in my circumstance, was I had this intense, intense headache and intense worsening of my neuropathic pain.

And, you know, I didn't realize that it had a tick embedded on my head until 36 hours into this, and I kept feeling worse and worse and worse, like, and then, like, oh, my God, I think that's a tick.

And so we went and got the tick pulled out, then extracted, and, I went to, you know, treated, for that, and, I could tell, upon getting treated my, my neurologic symptoms, resolved loud, you call it that so promptly?

Yeah. Yeah. And super interesting. It was this intense pain and, you know, and pain is part of my M. S. So I'm going to invite you to, to comment on that.

What do you think was happy with the interaction between the tick bite and the rubbing up of the pain I have with the Ms.. Yeah, absolutely.

Regional Risk, Family Cases, and Tick Exposure

And that's one of the things that I really wanted to discuss today was, you know, again, how these organisms really have a high affinity for nervous system tissue and that's going to call your immune system in to attack the organism.

But since these organisms are in the nervous system, you can see an exacerbation of any host of neurological symptoms and potentially even any sort of underlying neurological autoimmune condition.

And I imagine that this will also, if you have any kind of mental health issues, if the person is dealing with you had a tick bite that may well exacerbate those, psychiatric symptoms, whether it's anxiety, depression or more serious psychiatric issues, related to delusions, hallucinations, any of those spectrums be amplified?

Absolutely. I again referencing Brandeis, he commented that with the Bayesian particular, if you're seeing anxiety attacks that last over an hour, that's very characteristic of bizarre, these organisms can affect the autonomic nervous system.

So other things along with that part's dysregulation of the heart rate, fluid retention, sleep cycles, people may exhibit sort of this a I'm trying to sleep, but my heart rate feels elevated.

And part of that is just the autonomic nervous system. It could be due to the fact that these organisms get in the brain. Maybe they're clustering by the super cosmic nucleus, which regulates day night rhythm.

And so the information there is just perturbing the function that's governed by that region of the brain. So yes, on all the above, something like brain fog could be due to the increase coagulation that these organisms cause.

And therefore you have impaired circulation. So there's a whole host of ways in which these these bugs can affect the nervous system. So in general, how long might the treatment course last.

When we're taking a verbal approach, at least six months, which is actually longer than, you know, the clinician in me likes to get people to the finish line as quickly as possible.

But because these organisms, again, can suppress the immune system, they can hide behind biofilms. This is something Marty Ross has talked about with different organisms anywhere between six months to a year.

Now, that doesn't mean that that six months to a year is going to be this tumultuous path of die off and not feeling well. That's a little more acute on the front end.

But just to make sure someone doesn't have a regression, meaning, you know, they're feeling better, let's say 3 or 4 months and you stop treatment. They go back to their life, and then six months later their symptoms are coming back.

So this is an area where I think, if unclear, you want to overshoot rather than undershoot. So at least six months. And if someone's got a longer history I would keep them on some sort of prophylactic, if you will, antimicrobial therapy for six months up to maybe 12.

So this is a long, long journey, six months of a normal program to get through whatever organism that has been identified. Then there's a transition to some type of suppressive therapy, which is probably a lower dose.

And perhaps slightly different herbal preparations that are continued for another six months. Precisely. And it doesn't need to be too laborious. It could be as simple as someone maybe has four herbal tinctures that they dose 2 or 3 times per day.

But, you know, again, I learned this where I stopped treatment too early. I had a few months where I felt awesome, and then all of a sudden I started having numbness in my forearm.

I started not sleeping well. I started being a little more forgetful. So I kind of learned this the hard way that, you

know, if I could go back in time, I would have gladly continued with the treatment, but I just didn't have the experience and the wisdom then to understand you.

You know, you can't look at how you're feeling day of and to be on the safe side, really over treat rather than under treat. Because if you leave any of these organisms in the system, they can sort of start to repopulate and, and grow back, which which, you know, I don't like that.

You know, the gut focused clinician in me likes to try to get people there quickly, but, you know, again, these organisms, as one example, they can actually directly in fact, your white blood cells.

So they're pretty savvy with their ability to evade the immune system, which is why being a bit more comprehensive and prolonged, it is probably the better way to go.

No. Do we have to be concerned about transmission to other members of the household? So, you know, if if we have an infection, does a mom have to worry about, you know, say who's breastfeeding?

Closing Thoughts and Where to Learn More

Does you have to worry about transmitting to her infant? Do you have to worry about transmitting this to your intimate sexual partners? The sexual transmission piece?

I don't know, I'm not clear on that. With transfer from mother to child, that has been documented with some of the organisms. So that is something that, you know, you want to think about and consider especially, let's say your symptoms indicate you've had this infection pre pregnancy.

Then if you have a child with similar neurological symptoms then screening the child would you know would be a good idea. But from the sexual transmission piece I don't know.

We don't know. I suppose we may know. I just I haven't gotten that far in the research. So there might be an answer out there. I just I just I don't know.

Okay. Well, Michael, this this has been very thought provoking and I'm sure useful for, people who are listening. Northeast. Northwest. You're definitely in a higher risk area.

The Midwest can still happen. The South could still happen. Yeah. I'm just really quick, if you don't mind. I had a friend in California who was having just a bit bouts of anxiety, and he recently came back with tick-borne relapsing fever, which is one of the types of Borrelia.

And he had been struggling with this for years, and he had done, you know, all the to science, you see, like all carnitine, various nootropics, keto diet, sauna and cold place and just really wasn't able to make a dent in this, so, you know, his debilitating anxiety, even though he's in Northern California still, you know, from from a tickborne etiology.

Okay. Well, I think we've given our listeners a lot to consider. And so where could they find out about you? And, are you still seeing patients? I am, and we at the clinic are.

And obviously we're now doing much more with this in a telehealth model. So, you know, if people can't find someone locally or they just, you know, they want to consult our clinic for some perspective.

drruscio.com drruscio.com, my heart goes out to people as someone in this camp, unfortunately, who struggle with these persistent, annoying neurological symptoms.

But, you know, there there is hope out there. And so I'm just just really appreciative to be able to share this with your audience. Okay. One more time, your website drruscio.com Dr.

Ruscio.com. Great. Thank you so much Michael. Thank you Terry.