Introduction and Dr. Nathanu2019s Background

– Hey everybody, this is Dr. Diane Mueller, your host of microbes and mental health and I'm so thrilled to have Dr. Neil Nathan on our calendar today, welcome to the summit Dr. Nathan.

Can you please tell us a little bit about yourself and about your work in the world with mold and lyme and all of the chronic infections that we know.

– How much time do you have Diana? Okay, okay. I'm Dr. Neil Nathan. I'm an M. D. And I have slowly worked my practice into helping those patients that have kind of fallen through the medical cracks, Those patients who have seen many other practitioners and somehow haven't quite gotten a diagnosis or treatment that's really working for them.

And what I've learned and discovered is that a very high percentage of those patients have either mold toxicity or Lyme disease with some of its attendant co infections and so I'm kind of a specialist in that I've written a number of books that people might want to look at, the number one being toxic, heal your body from mold toxicity and Lyme disease.

Um um listening audience might expand on what I have to say with that, but I've been in medical practice for over 50 years. I'm currently consulting a lot, writing two more books and I have a mentorship program with Joe Crista in which we teach about 100 and 50 physicians how to approach these complicated cases. So that's a that's the short version.

– Beautiful. Yeah, thank you so much and there's there's so much to break down here. But I think first, like let's just look a little bit more into mold and lyme and Bartonellas as the topic here is mental health. So can you really talk a little bit about how these types of infections and toxins really impact that our our mental wellness and go deeper into that. – Sure. Very important topic.

Both mold and lyme. Although one is a toxin and one is an infection both affect the brain in the same way and the reason for that is they both release into the body what we call an inflammatory cytokines that inflamed the brain so that any tendency to mental health issues will be exacerbated worse people who have never had mental health issues may suddenly become severely anxious with panic attacks, depressed feeling hopeless O. C.

D. Behaviors virtually any mental health issue can and will be exacerbated by molder lime if somebody has it now to make that worse, both mold and lyme eventually will trigger what we call limbic dysfunction.

Vagal nerve dysfunction and mast cell activation, all of which are separate topics.

How Mold and Lyme Affect Mental Health

Those three areas we've together biochemically and physiologically to really explain why patients who do have mold and Lyme disease will become um psychologically or mentally um upset. Two degrees that become extremely severe and they all need to be considered when we talk about treatment because if we want to treat it.

We not only have to treat the cause which is often molder line but also what those causes are triggering again. Pick dysfunction, vagal nerve dysfunction and mass cell activation. So forgive me, But that will be my drum that I'm going to beat during our discussion today. – Oh, it's so important.

It's so important to like these. I think we get so lost sometimes and like kill and detox and we can forget about some of these like common themes and, and just, you know, almost miss them. So one of the things I just think, I feel like people might ask is one of the things you said was that any mental health issue that we're looking at can get worse

with Lyme and mold.

Can you talk a little bit about like more of the causation? So do you see in your work that somebody has no mental health disorder whatsoever? And there's actually like a causation of say, triggering a mental health disorder from the initiation of the infections and toxins we're talking about here.

– Not only does that occur, it's not uncommon that a large percentage of the patients that I treat with mold toxicity and lime weren't anxious or depressed before they got sick either before they were bitten by a tick or before they were discovered often belatedly that they're living in a moldy environment and it directly triggers those things. So yes, there's no question.

So if you or your loved one or a friend has a recent onset of a mental health issue and never happened before. I think that there might be a physical cause a lot of people immediately jump to, oh it's stress, I'm going through this so this is happening or and that maybe also occurring. But if it's a physical trigger like mold or Lyme, if you don't treat it, you won't get well.

So the key is to look for deeper causes of what is ever causing those symptoms. And I will add to our discussion of mental health. Not only are we talking about anxiety and depression, but we're also talking cognitive impairment, the brain fog, difficulty with focus, memory and concentration so that that I think comes into play in this discussion as well.

– Yeah. And let's break down now. So you said vagal nerve limbic dysfunction and mast cell activation syndrome. Can you break those down like one by one and really talk more deeply about how Lyme old co infections actually create the imbalances that you're you know, in these three areas. – Sure.

So first of all, let's talk limbic system, The limbic system is the part of the brain that monitors and regulates emotion and sensitivity, that's its job, its protective in nature, it's trying to scrutinize the stimuli in our environment for safety and if the limbic system doesn't think we're safe, it will literally cause symptoms to make us avoid that stimulus, not trying to hurt us, but as the limbic system becomes increasingly dis regulated, it begins to be overprotective becomes what we call hyper vigilant.

Limbic, Vagal, and Mast Cell Dysfunction

So stimuli that might be safe it will react to very badly. And this shows up both in emotions. So anxiety, depression will show up that way and it will show up as sensitivities to everything or one or more of these things light sound chemicals, touch food and E. M. F.

And we're increasingly finding that electromagnetic exposure, especially with the advent of 5G is really playing a major role for a lot of our patients as well, often overlooked. Okay, so that's what the limbic system is.

It works in very close intermeshed connection with the Vegas, what we call the vagus nerve system. It's not just the vagus nerve which is a cranial nerve, a separate part of the brain in the limbic system, but it also includes the other cranial nerves that are located quite next to it.

The vagus nerve also, its job is to protect us for the same reasons but it has some other physiological effects so that if the vagus nerve becomes dysfunctional.

For one thing, it controls intestinal motility. So people if they develop constipation or diarrhea or alternating vagus nerve needs to be considered, it also controls the entire autonomic nervous system. So if patients develop pots which is where they stand up and get lightheaded and dizzy all of a sudden the vagus nerve has to be considered with the limbic system because they work together so carefully.

So one of the first things I have to do with my patients who become unusually sensitive or unusually sick is before they start treating mold in line, even if they have, it will often start treating the limbic and vagal system.

This is not psychological, it is neurological and a lot of patients are told, oh you've got so many symptoms, this is all crazy. It's got to be in your head. No, it's not.

This is a toxin or an infection which is triggering this event. That's what needs to be treated. But we often need to start by treating the limbic and the vagal system. The third major player which works again, very intermeshed connected way this mast cell activation, mast cells are a cellular form of protection in which the mast cells which line every tissue of our body but are especially numerous in the tissues that face the outside world.

Our sinuses are neck or throat or gut, that's where they're most located. And if they get excited, we call them hyperactive or hyper reactive. So mast cell activation is that process. Then people start to react immediately to foods or touch or other things that they never reacted to before and that becomes increasingly worse, mast cells release not only histamine but hundreds of other biochemical mediators that create inflammation.

So not only do we have inflammation being created by moral toxin and Lyme disease. Now we have information coming from mast cell activation. So again, that needs to be treated first to quiet it down to make our other treatments way more effective and usable.

So that's a cliff note version of that physiological loop. – There's so many different directions. I can take this, I'm gonna take this two different directions. My first direction I'm gonna take this is coming back to some of the limbic system and vagal nerve.

I imagine there's people that are listening to this conversation are thinking this sounds like a lot like P. You know P. T. S. D. And right. And so at what point do you feel like getting people into more of a state where they are not triggering a PTSD response by going into nature and worried about a tick or a PTSD response because they're around an E.

M. F. Or they're traveling in a multi response or a multi place like it the symptoms are so PTSD like when we're talking about the limbic system. So where do you feel like that plays into the role with all of this?

– In a in a sense it is a form of PTSD in which people have had an experience eating a food and getting worse um Being in a particular environment and having a stimulus and reacting to it badly that they're going, oh I don't want that to happen again.

That was pretty awful. And so they they're nervous system responds in a PTSD like fashion. But again I really want my take home message today for everyone listening is that every single thing I'm talking about is treatable so that it's not this is to help understand what's going on but also to understand we can treat it. So it isn't the conversation of Yeah, sorry, you're out of luck. Too bad.

Not at all. So we can treat the limbic system. There are multiple ways of literally rebooting that we can treat the vagus nerve. There are other ways specifically we can reboot it.

And there are multiple approaches, both with herbs and supplements and pharmaceutical agents to quiet mast cell activation. So all of this is treatable.

– Amazing. I'm so glad to orient to that for everybody. And then as far as like the treatment for em because I know this is a big topic for a lot of people and like my clinical experience has been some people and quite a few people with them, cats can actually react to the common thing we do, which is try to give them a mass cell type of medication, right? Something that's going to suppress the mast cells. So where do you like to start?

And what do you like when thinking about? Okay, well we have this m cast situation before we go on to all of these other things that are treatable and we have to quell all of this inflammatory response. What is your do you have an overarching and it's a big topic. But do you have an overarching big picture advice you can give people area? – Okay I do.

First of all in my experience, many patients like either natural materials or pharmaceuticals. Sometimes both but not

always. And I will usually try one class of natural materials and some pharmaceuticals just to see which my patient prefers. This is not psychological, it isn't about what you want. So a lot of people want to react better to natural materials. I understand that but sometimes the pharmaceuticals work better. So I'm a really practical person.

I just want to help people. So whatever it is that works, that's what we're going to be looking at. So from the natural world we want to start with what we call a mast cell stabilizer which is something that stabilizes the mast cell to make them less reactive.

Those include things like satan or perilla seed extract, a product that we call pyramid. We can also work with D. A. O. Which is an enzyme that breaks down histamine In the pharmaceutical world. We typically will start with what we call H one and H. Two blockers.

PTSD-Like Sensitivities and Treatment Approaches

Those are simply medications that block the effect of histamine on the receptors H one and H two. They're very simple and almost everybody has taken these before. In the H one category we have Claritin Allegra Zyrtec Zeisel in the H two category we have Pepsi.

So I'd like to take as a start Have people start on say Claritin and Pepsi in the evening and have them take corset in 30 minutes before each meal And let me explain the 30 minutes before each meal. The complicated part about mass cell activation is that it looks like allergy.

A person eats something and immediately reacts with sweating, abdominal pain, cramps, diarrhea, hives, itching, even fatigue or shortness of breath. That's a histamine reaction. It is immediate, but it's not allergy. It looks like allergy.

Those are symptoms that look like allergy, but it is a reaction of the mast cells. Here's the kicker. The mast cell activation varies fluctuating based on the fluctuations of mold toxin in their body.

So as mold toxin, lettuce fluctuate, so does their mast cell activation. So it is very common for patients to have the experience of. I ate this today. Nothing happened, but I ate the same thing yesterday and I really reacted badly to it. This is crazy.

What's that? It's not food. Allergy. It's how reactive the mast cells are at the moment that you put that food in your body. So with that in mind, it really helps to have the mass cell activation blockers be taken before you eat where they're not going to work well. So you have to take the mast cell stabilizers 30 minutes before you eat in order for them to be effective and sometimes that's why they don't work for some people. – Yeah, that thank you for that.

I think that clears up for so many people, why One thing works one day and doesn't work the next day. Which I know is like it's maddening. So let's move on to talk a little bit more about testing and and I know I mean we want to talk about testing for lyme and mold for sure.

But also in the conversation about testing. I feel like there's so much confusion in the world of em casts of serum trains of all our all our different markers that we can use for MCAS. So um since we're already on the topic of maybe can we talk about the testing for MCAS and then we'll move on to testing for an evaluation for Lyme and mold. – Sure the testing is totally inadequate.

What I mean by that is the issue with these mediators. I said there are hundreds of them is that they are released. Transitory li meaning a poof they're in the system poof, they're gone. But their biochemical effects go on for hours or days longer sometimes because of their in the body so briefly you rarely can catch them in either urine or blood test.

So that yes, we have blood tests unless we have urine tests. They're primarily used in the academic setting where you're writing a research paper and you have to prove to the world that they had laboratory evidence they had mass cell activation. Now from my perspective, some physicians have really mistaken that experience.

So that for example, just this week I had a patient who had severe mast cell activation. She was evaluated by three major medical institutions in this country and because she had a negative trip taste, they told her you can't possibly have mast cell activation makes me crazy or furious or both. I'm not sure.

So you have to listen to your patient when they're giving you a classic story of within seconds of eating this, I am reacting. They have mast cell activation.

I don't need a test and in fact the treatment confirms it if I treat you for it and you're better than I really know what I'm talking about and I'm really helping you.

Too many people have been told by their academic physicians all I tested you for it and you don't have it. The test isn't accurate. So please don't let someone tell you you don't have it based on a laboratory piece of paper not accurate enough for you to get the benefit you need.

– And so for that you feel like the biggest thing that you've seen as far as identifying it really is related to food correct. And I understand you correctly, like the reactivity to food on top of the inflammation to make sure that's clear.

– Yes. And that's that's the easiest one to tell you can get it from touch certain things that you put on your body will trigger it. You can get it triggered by E. M. F. Which is much more subtle because you don't realize you're getting E. M. F. So the food thing is the most obvious and the easiest one for me to talk about. But you can have a mast cell activation component underlying the inflammatory process of molding lime.

MCAS Testing and Practical Management

So it is really helpful to not only look for it but even consider empirically treating it early on again, if someone responds to that treatment, wow that's better.

Which is very common. I go, okay, you have a mass cell component, I'm really glad we did that. And now that will stabilize you so you can respond even better to what I'm going to treat.

– And how long do you typically see from a treatment of them cast perspective, how long do you typically see? Somebody needs to treat it to say oh I'm better now we can say that is involved and you move on to something else.

How long for that diagnostic to be true? – Okay so first of all if someone is responding well to what I'm giving them they will within a week or two this doesn't take months to see a response.

If someone has an cast, they are going to feel better with treatment fairly quickly but they can't stop treatment until we cure what's causing it. So and I see that a lot of people went, oh I'm so much better, this is great, this is really helping. And so I stopped it and now I'm going on to and I go, whoa not so fast because mold toxicity or lime or both will keep triggering mass cell activation. So it has to be continually treated until the cause is gone.

Once the cause is done you're done one of the controversies and I do see it with my colleagues who work in this area. Is there often people are told you have mass cell activation by the way, it's not rare. 10% of the population has it, but it's not always triggered. Which is a good thing.

So yes, you have it but from my perspective you can be cured of it by treating what's what's triggering it in the first place. There are many experts who treat massive activation forever because they're not looking for cause. So from my perspective helps to look for cause but you have to also keep treating it until that cause is gone.

– So then let's talk about testing for Lyme for the co infections for mycotoxins because obviously this is another area where we see in our profession that there's just so much craziness I think around what do we test? How accurate is it?

These sorts of things? – Well I come to the table with my biases. I've looked at every testing possible. I have no association in any way, financial or otherwise with, any lab, any testing facility, any supplement, any medication that I'm going to be mentioning here and I have intentionally done that throughout my career.

So that since I do a lot of teaching, I want people to be clear that if I recommend something, it's because I believe it doesn't make it right, doesn't make it true. But I believe it.

I based what I say on having personally treated successfully three or 4000 people with mold and another three or 4000 people with line. So I can I can say from my experience that I'm comfortable that I know a way or multiple ways to treat both mold and lime successfully. Um, we're always looking for better ways.

We're always looking to find out how to do it better. So yes, a lot of people have opinions. I can only share with you the methods that I have found work. From my perspective, we're in the infancy of learning about all of this is fairly new information.

We know enough to help the vast majority of people who have it. But I can't help everybody yet. I want to, but I can't and until I do, we won't be there yet. So still learning, having said that. Okay, sorry for the long digression.

From my perspective, the most accurate test by far is urine mycotoxin testing. This is very simple, simply collective urine in the morning mail it to the lab and they analyze it for mycotoxins if there are micro toxins in your urine.

For the vast majority of people you have mold toxicity. It's simple. It's clear and straightforward. I will acknowledge that not everybody agrees with that and people have a variety of objections too. But what about this or what about that?

Doesn't disaffected? Doesn't that affect it? But there is enough research and enough experience not only for me, but the hundreds of other physicians have done it.

That if you have a positive urine test, you almost certainly have mold toxicity. And the good news is we can treat it. So for me, you're in mycotoxin testing is key. There are several labs in the country to do it again. My bias is that the real time lab provides the most accurate and extensive testing available.

Also good news for people who have Medicare. It's free real time labs is my go to lab. But I also get good information from the Great Plains laboratory.

Vibrant health has a lab that I have not found is accurate and that my mic. So lab is also a lab that I have not found as accurate. Any of them can help to make the diagnosis. But what I want from the air and is not only a diagnosis but I want to know which toxins are there so that I can more specifically treated because in the system that I work with, we have binders that specifically bind each of the micro toxins and they're not all the same. So with that information I can design a blueprint to treat a patient with a great deal of precision.

So for me you're in mycotoxin testing is the bomb. There are other tests that are on the market that are what are called biomarker tests. They can they can't measure mold mycotoxins. They do measure inflammation.

So if those tests come back positive that's helpful but they are not specific. So if I get an elevated level, okay but I still have to tease out do you have mold if you have lime if you have martin, L. A. Or another infection so they exist.

I don't find them that helpful.

Testing for Mold and Lyme

But again some doctors like to use those tests, there's a test called visual contrast testing in which you can literally um subject your eyes to a little bit of test online that again I can tell you that you might have a problem but visual contrast testing will be abnormal in mold in line and with mercury toxicity which is common in my patients as well. So again it can help in a very inexpensive way to point us to a diagnosis but not really make the diagnosis.

So again that's my bias on how to go about diagnosing a mold toxicity and very helpful just a urine test and it can help tease it apart from Lyme or co infections.

So switching gears, if we're going to talk about line and co infections, the testing has gotten better but it's still imperfect and there are a number of reasons for that. One of the main reasons is that Lyme bacteria affects the immune system in a very specific way it weakens the immune system's ability to make antibodies to it.

So what that means translated into English is you could have lyme disease and it won't show up because your body is not making antibodies, it will look like a negative test.

But if that same person were to take antibiotics for 3-6 months and repeat the test that would be floridly positive and what that's doing is okay now we're treating the lime successfully strengthening the immune system. Now that immune system can make antibodies and now we'll get a more positive test. So you've got to be careful with lime testing because it could be negative and still that person have lime.

So as dr Horowitz reminds us all the time. Lyme disease, even according to the CDC is a clinical diagnosis meaning if someone has all of the symptoms of Lyme disease, whether or not they remember being bitten by a tech, think about it. Look for it and if you really suspect to treat it anyway because otherwise you'll be not helping that person because their immune system can't respond.

Having said that there's a lot of labs out there unfortunately for insurance purposes, many people get a quest or Labcorp basic Lyme test, it's called an antibody test.

It is fairly close to worthless because it misses lime most of the time and it has been used by medical doctors for years to tell people you don't have Lyme.

I ruled it out, I've tested you for it when in point of fact they've done a truly lousy test, which really hasn't ruled it out at all. And I can't count the number of patients who really had Lyme disease who missed that diagnosis for years because they were told you were tested and it was negative. So I just want to say not adequate.

Also Labcorp and Quest do what's called a western block. Again, that's a better test, but it's not complete partly for the reasons that I talked about. But also the Western block from Quest and Labcorp leaves out certain pieces of the test based on an old line vaccine that came out. They left it out and they've never put it back in. Even though the vaccine vaccine was taken off the market very, very quickly after putting it on the market.

Um, so if you have a test from them, not adequate. Sorry about that. The lab that has specialized in this and has done the best in my experience is I gen x that's been their specialty. They include all species of lime.

They have developed a way of testing for more lime species. Again, one of the reasons that Lyme disease was missed is we have way more species of Lyme causing it than we realized. And the older test, the old western blood only checks for one species.

The newer chest checks for more. So the newer test is called an immuno block from eugenics. It is by far more accurate than what we've had before. Same thing applies to co infections.

The new immuno blot from my gen x is far more accurate for detecting bartonella along with what's called a fish test. And that fish test is also an excellent test for babies. So those are the better tests that are available. And so if you've been tested for lyme and told, nah, you don't have it, get hold of the original testing if possible and really look at it. It may not be accurate enough to really have ruled it out and missing the diagnosis is a tragedy.

– So a couple follow up questions on all of this and thank you for all this information as to go back to the mold test. One common question that I see come up when people get some of these mycotoxin tasks run is some of these molds that we look for.

Sometimes these molds can also be found in food. So what is your response to that for people that are concerned

about? Is this test accurate from like, oh, I'm actually sick for my environment where I just need to avoid these certain foods.

How do you respond to that? – Well, first of all, the vast majority of mold illness comes from the environment, not food. It's really not been studied, although it's been used as an excuse now there are trivial amounts of mold toxin in some foods And we know what? Those are.

The only study that's been done. And it's only a pilot study is one that I did a couple of years ago with the Great Plains lab. We took eight patients.

Not a large amount, not enough to make sweeping statements about, but we took eight patients with mole toxicity. Then we had them avoid all foods that are known to contain mycotoxin for 10 days.

Then we measured their urine mycotoxins. Then we had them pig out on all of those foods for 10 days and we repeated the urine mycotoxin test. The result of that was that seven of the eight patients surprisingly eating supposedly moldy food, Their urine mycotoxin numbers went down okay.

In one patient, Okra toxin and Okra toxin alone um went up a little bit. So that test needs to be done with way more people to get way more information.

But what little we know food isn't a major source of mycotoxin. And for those people who um I don't want to look at the fact that their home or work might be the issue. Let me assure you.

It is way, way, way, way, way more likely to be the issue. And that's what you need to focus your attention on. – Yeah, thank you for that. And then as far as the lime testing, we're talking about antibodies and we're talking about the immune suppression and after treatment immune system gets reactivated.

Do you ever before somebody say does antigenics test you ever have them? Do lymphatic massage? Ever have them do anything to treat line to trade or to say activate the immune system before test to see if that can help with a positive result. Is that ever anything you advise?

– I don't, most of us in the lyme world don't but I do know that day trickling heart has recommended that and used it as a way to get a more accurate number.

Um I haven't done that. I understand his logic and I since I don't have experience, it's my basic habit never to comment on something that I have no experience with. I don't know, I've gotten pretty accurate results without doing that for The 15 or 20 years I've been treating lyme disease. So I'm comfortable with what I do.

Maybe there's a better way. I don't know. – Another question. I know that comes up a lot and it's, you know, like you're saying with the mold, like finding the mold and you got to get out of the house and sometimes we don't want to look at it right? Sometimes patients want to look at it, have you and your experience and I know people are gonna wonder this, have you and your experience seen many people that can get better if they're still living or working, you know, 40 hours a week in a moldy place.

– Categorically. No and no. You. one of the things that all lyme experts agree on all mold experts agree on is you can't get well if you stay in a moldy environment, it's absolutely not possible.

And some things that people don't know is I ask my patients, how long do you think you need to be in a moldy environment in order for it to make you sick?

And the answer is minutes. So a 40 hour work week in a moldy environment. That's a recipe for staying sick and getting worse. So I'm sorry but the environment has to be looked at and either you have to get out of it or you have to remediate it. There really is no other choice.

– Yeah. Yeah, I totally agree. Let's move on to treatment now. So and before we actually get into treatment, that's

like wrap something into that which is offline.

We talked about crypto pyro Yuria for a second. So I want to make sure because I feel like that's such a the topic that I don't think is well covered yet in the lyme and mold world.

Mold Exposure, KPU, and Methylation

So um as before we jump totally into treatment, let's talk about what Kpu is how molding line can trigger that, you know, the genetic um activation, the epigenetic expression and how that's tied into this whole picture. – Okay, so the word pie roll or crypto parole is a big complicated word. And really what we're talking about is We all red blood cells make hemoglobin constantly and we're constantly breaking down our red blood cells. They're designed to last 90-120 days and we turn them over again. We recycle it.

We recycle. The hemoglobin was a very precious molecule. The way we recycle hemoglobin is to break it down by certain enzymes in a particular way. And paroles or crypto paroles are a hiccup in the metabolism of hemoglobin. That hiccup is augmented or exacerbated by a number of medical conditions, including surprisingly mold in line.

So we see a surprisingly high percentage of patients. Now it's easy to measure crypto paroles. You can do it with a urine test and it shows clearly whether you have it or not. It's a fairly accurate test.

My bias is that the laboratory in the country that does the best job is health diagnostics. I think that they the head of that lab has been working in that area for years and he's got more experience than anybody I know. So he does a particularly good job with that.

If we see an elevated it's called KPL standing for crypto parole or H. P. L. One of the other metabolites. It's easy to treat. And it typically shows up as an exacerbation of depression and anxiety so it really relates into this and it's easy to treat it.

You can take a whole level of anxiety and depression off the table by looking for it and then treating it. And the treatment is simple. It's vitamin B. Six, magnesium and zinc.

So it's something to look for along the same lines, mold and lime also invariably create mitochondrial dysfunction and mitochondria protect themselves when they get dysfunctional by shutting down methylation.

So virtually all of our patients aren't misleading as well. This also feeds into mental health issues and often needs to be addressed. So again again my bias health diagnostics does. I think the best test for that and that can tell us exactly which supplements to give a patient in order to get their methylation rebooted and and functional again and again.

That makes a big big difference. Not only in patients with depression anxiety but we see it in almost all of the Children who have A. D. H. D. Or autism spectrum methylation issues are super common and treating it is often extremely effective and helpful.

– Okay beautiful. And then moving on to Lyme and mold and as we talk about Lyme mold co infections, Kpu all these things I think also in addition to talking about the kind of big picture strategies also about how do we think about treatment order? Like when are we thinking?

You already mentioned? Like MCAs we gotta you know start with that oftentimes for those people but for everybody else let's say that's you know suppressed a little bit. That's no longer a huge problem.

It's actually being managed now they're still on their their their their products then what order are we gonna do? What are we gonna start with line? When are we gonna start with mold? When are we going to focus on the mitochondria?

When are we going to work with the KPU Talk to us a little bit about that if you would. – So my bias is to treat mold

first, then lime. Give you my reasoning here. And that's what I've been doing for years.

And I realized that when I was treating Lyme and not making progress because I wasn't getting mold, most of us started with lyme. I started in the lime world, then learned about mold. Many of my colleagues because of that start with lyme, then move on to mold. And I think that's a mistake.

Even though I started that way myself because often it's the mold inflammation that's preventing the Lyme treatment from working.

Treatment Order and Recovery Strategy

So if we want to shorten the use of antibiotics, which we all do, no one wants to use antibiotics for a long period of time treat the mold first, that will definitely shorten it a second reason to treat the mold first is the symptoms look the same. It's very difficult on the basis of symptoms alone to tease apart mold lime Barton Ella. So if I treat the mold and all the symptoms go away, I don't need to go down the rabbit hole that is lime.

I can stay okay. We're done on the other hand. If I treat the mold first and we have 70% improvement but we still have 30% to go the 30% that's left by symptoms. Will guide us into what's left.

Is it lyme itself or Bartonella or maybe CIA or alycia or which co infection do I need to be looking at? So by treating the mold first we learn that third, treating mold is much less stressful on the body than lime because antibiotics are not involved.

We might use antifungal but that does not have the same effect on the body as antibiotics in terms of messing with the gut flora and the microbiome which we don't want to do as best we can. So for all of those reasons I recommend treating mold first. So the treatment order is my my patient population is extremely sensitive.

So for my patients almost always we start with the limbic and vagal system, then mast cell activation, then mold. And if they have Lyme that later, if they have measurable biochemical issues, then I treat that early on because it's an easy thing to treat and will often help people stabilize and improve and move faster through the treatment. So if I had a KPU I treat that early on um methylation maybe not because a lot of people early on can't use the supplements for methylation. It put some it throws them under the bus so each patient has to be dealt with separately.

Now if I have a patient with a strong constitution, I may not need to do vagal olympic or training or mast cell activation. I can immediately start trading gold and we're off running so everybody is different and it's my job to assess my patient for sensitivity for the strength of their constitution.

And sometimes the only way I can learn that is by giving them something and seeing how they respond. Because I work with sensitive people. I have learned my bias is to start with lower than usual doses and work up from there.

If you start with normal doses you have no idea who's sensitive necessarily and you can really aggravate something badly if you do that. So my bias is to start with low doses of everything and then gradually increase as the patient proves to themselves and me yes, I can do that and I can do that comfortably. Beautiful.

– Thank you so much. Is there as we wrap up here, I know you said one of the take home points you really want to help people understand is like this is this is reversible, right? Like this is not something you have to live with. Is there any other like main message that you want to make sure that you really get out today in our time together?

– I think I've said it already but if you are dealing with a mental health issue of any kind including cognitive issues, think mold, think lyme definitely be at least assessed for them early on. You don't want to wait and go.

You know, I should have looked for that two years ago. I might be better now if I had and include. I know it's complicated but my take home message is everything we're talking about is treatable and so there is hope for you to get better. No matter how long you've had these things, it's treatable. – Perfect. Thank you so much for your time

today.

Dr. Nathan. It's been a pleasure. – Good. You're very welcome. Thanks for having me.