



THE

FATIGUE

SUPER

CONFERENCE

**Help for sensitivities:
dealing with mold and Lyme Disease**

Guest: Dr. Neil Nathan

5.02 **Alex:** So my guest for this is Dr Neil Nathan. Dr Nathan has been working with fatigue related conditions for 25 years, he's been practicing for 47 years and has published several books and research papers in his field. His most recent book 'Toxic: Heal Your Body from Mold Toxicity, Lyme Disease, Multiple Chemical Sensitivities and Chronic Environmental Illness' has helped physicians and consumers understand how mold toxicity and Lyme Disease are major unrecognised causes of fatigue. I have to say it's one of the clearest and best books I've read in the field so I very much appreciated reading it. Dr Nathan thank you for joining us.

I think a good starting point would be to understand a little bit about how you got into this field, so what drew you to this group of patients, which for many people are, they walk into their office and they are kind of the last person they want to be seeing. You've made a career of being passionate and understanding about this group so yeah we'd love to hear about what inspired that for you?

6.02 **Dr Nathan:** OK two answers to that question Alex, and thank you for having me. First I have always been wired, if you will, strangely in that I have always wanted to help every single person who walked into my office. And I recognised very early on in my practice career that I was going to have to learn a whole lot more than what I learnt in medical school if I was going to do that. So early on I began to study acupuncture, homeopathy, emotional release techniques, hypnosis, and the list goes on, osteopathic manipulation. Every single one of these wasn't a cure but it really helped certain people improve their health so that as my, if you will, tool bag increased in size I was able to help a whole lot more patients. And I've always been fascinated by not just the patients I could help but much more interested in the people I couldn't help because they were the ones that I felt would teach me a lot more, and they have.

So rather than, which we see a lot in medicine, I know Chronic Fatigue patients have been treated by dismissal because they're too complicated or too difficult or something, in fact was intrigued by them, which is 'That's fascinating why do you have that and is there anything I know that I can do for you?' So within that context, by the 1980's I was the medical director of an inpatient chronic pain unit, in which I was using my skills to help patients who'd had chronic pain for a long, long time and able to help a lot of patients who other people had given up on.

We began to see in the mid 80's an illness which was then called Fibrositis, now called Fibromyalgia, which was quite odd and strangely there was an epidemic so that we were seeing a lot of patients that I had never before seen in my practice who had chronic fatigue, cognitive difficulties, difficulties with sleep, bowel/gut issues, headaches, migraines. These all fit together but we didn't understand how and it was originally assumed by most people that this was a psychogenic illness because certainly nobody could have all of those things. And when we attempted to treat them with psychotherapy or anti-anxiety agents or anti-depressants, these didn't help at all. So it became very obvious to me early on that whatever we were dealing with was not primarily a psychogenic illness but something very real and we needed to get to the bottom of it.

And over the ensuing 25 plus years, 30 maybe, we have learnt a great deal about Chronic Fatigue/ME, what causes it and how to treat it. So it went from being a mystery to an actually very curable, treatable illness in my experience.

9.37 **Alex:** What do you think it's been about your, your approach to medicine and your approach to your patients that it's allowed you to have that level of curiosity? Because I think often physicians and practitioners, there's an inevitable kind of longing for certainty and there's a kind of comfort that comes from knowing the steps to go through with people. And what I notice with people such as yourself, who have spent decades going deeper and deeper into these immensely complex areas is that there's a, somehow, a fundamentally different attitude, like a different way of looking at the patient. And I'm just, before we come into more of the kind of the details and the understandings that you've come to, I'm just curious a little more about what served you, or what supported you in having that attitude do you think?

10.24 **Dr Nathan:** Well first of all if you want certainty in clinical practice and medicine you're living on the wrong planet.

(**Alex** laughs)

There is so much that we don't know, and maybe it's just an internal honesty, one of the things I will often joke about is I know how little I know and I am terrified about how little other physicians know.

(**Alex** laughs)

So it's, it comes from not a false sense of humility, I hope, but a true understanding of how little we understand about the human body. The amazingly complicated ways in which all the systems of the body interact and connect and I think that medicine has been taught in a way that does the practitioners a disservice. The essences of medicine in the past were 'let me figure out what you have, label it and treat it. So if you have a sore throat I will test you for the strep bacteria. If you have it I will give you penicillin, you will get well and we will all be happy. That's nice, in the world that I inhabit I don't see that all that often. What I am seeing is an increasingly toxic world with many, many, many more complicated components.

So illness that I see, all chronic illness I don't even care what it is, by definition has endocrine components. Any chronic illness is almost always caused by some inflammatory issue. So what is inflaming the body? And that word 'what' needs to be looked at in a very grand way if you will. Meaning it's never just a strep bacteria which, that's a nice simplistic model but we are now smart enough, wise enough to know that the human body requires a multisystem analysis approach. That simplistic approach is maybe OK for an acute illness or injury but for anything chronic we need a different model. We need a model that takes this complexity into effect so we can talk about structural issues, energetic issues, endocrine issues, neurological issues, gut issues. They're all involved, it's not, if you begin to understand how complicated the body is everything influences everything. So any other approach doesn't make any sense to me.

13.17 **Alex:** It's interesting, as you talk about all those different facets and pieces that interact because one of the other things that, as I was going into your book today, one of the things that I was really fascinated by was that you, you talked early in the book about identifying what you called 'public enemy number 1'. And finding, there can be lots of different pieces that can be, can be, either interrelated or indeed separate that are for whatever reason not functioning properly in the body and the way I kind of understood it as you were describing it is that in some ways over the years there's been less kind of confusion of lets treat this and lets treat that and more and more clarity of understanding what's likely to be the single piece that has to be attacked first, or maybe attacks the wrong word, addressed first otherwise in a sense it's a bit like rearranging the deck chairs on the Titanic. That you're just, you're not dealing with the core of the issue that needs to be dealt with.

So maybe say a bit about how you came to discover that way of approaching patients and why you see it as being so important?

14.20 **Dr Nathan:** Well first of all no other approach makes sense to me. Second I came to it by trial and error when I wound up treating things with what I thought might be an appropriate cause and not getting any results. So I came to it from an empirically sound approach, meaning all that I care about, and forgive me for saying this, is that my patient gets well. I would love to understand every single nuance of how that happens. I don't believe anyone on this planet understands that enough that we can. So I don't think my failure to understand it is personal, I think the entire field of medicine needs to be studying this in the kind of interactive details that I'm describing here.

So it's by realising that my patients weren't getting well that I began to take a step back and go 'Okay I did this for this patient and they got better. I did this for this patient and they didn't get better'. So what's the difference? How do we understand that? And particularly in this age in which in the last 15 years the field on functional or integrative medicine has come to the fore many physicians are learning how to look at the thyroid, adrenal gland, the microbiome, the intestinal dysbiosis, food allergies, all of these important components. We now have tests where someone can ascertain that you have been exposed to this virus and to that virus and to that parasite and we have all that. Unfortunately, many practitioners will grab onto the first piece of information they have and go 'ah you have chronic fatigue, you have exposure to the Epstein Barr virus. So we'll treat the Epstein Barr virus and you will get better'.

And what I am emphasizing is you have to really look at the entire clinical picture of the patient from the beginning or you're going to go down these streets in which you will treat someone for an Epstein Barr virus for two years and make no progress. And I see a lot of that by the way, in which patients have been treated that way. Or they've been treated for methylation issues for two years and make no progress because I think what practitioners of functional medicine need to learn, and patients need to remind their practitioner, that 'hello I'm not getting better, this is not working, erm, please go back to the drawing board. Let's go look at this again'.

So I think that that's the question that you are asking Alex.

17.35 **Alex:** Yeah it is and of course that goes back to what you were saying a little bit earlier about the importance of that curiosity and that willingness to now know and to discover through experimentation, which is so important from the point of view of the practitioner.

Let's come a bit more into one of the key pieces of what I wanted to unpack in this interview, which is the role of toxic mold within fatigue related conditions. And maybe you could start off by giving us a bit of a sense of what we mean by toxic mold, why it's important and how it can affect people. And then yeah, I'm obviously curious to get deeper into it from there.

18.10 **Dr Nathan:** Yeah certainly. Let me begin with a little bit of a historical description, which I'll make personal, as to how did I learn about this. So by the mid 90's we had learnt that indeed, for many of our patients, treating their adrenal, their thyroid, magnesium deficiency, their gut, food allergy made a huge difference in many patients with Chronic Fatigue/ME. They, the majority of my patients in fact, started getting better.

Now as I began to do more of this work I began to get referrals from my colleagues who were treating patients and not helping them. And so I had to begin to learn to look deeper. And so that overview, which I was working with back in those days, my friend and colleague Jacob Titlebaum, was working with and we were both writing the same material about the same information. We really did see this pretty much the same way and with the help of the vast majority of people we treated.

As more and more complicated patients came into our fold those same techniques became less effective and we began to go 'Huh, gosh I helped most of the people I saw before, now I'm seeing patients who are even more ill and it's not doing the same thing. So here's the question, what am I missing?'

The first big piece of that puzzle for me came with the realization that a large percentage of those people who were not responding had Lyme disease or co-infections. As I treated them another large group of the patients who had not improved now were getting better.

Then in 2005 one of my patients sat me down and made me read Dr Shoemaker's book 'Mold Warriors' and as I was half way through the book I went wow this is big I am missing something very important. I literally flew out to see Dr Shoemaker the next weekend.

20.30 **Alex:** (laughs) Right OK.

20.31 **Dr Nathan:** Well again you're right about my curiosity (Alex laughs). When I'm curious and I think that I've stumbled onto something important I have the habit of, well let me go to the source. I want to learn this from the people who are doing it. So I, I flew out to Pocomoke, Maryland, and Dr

Shoemaker and I became friends and colleague's early on. And it became very clear to me that mold was at least as big a piece as Lyme, probably more.

So our CDC recognizes that there are 300,000 new cases of Lyme every year and we would estimate that 10 million Americans have some degree of mold toxicity. It is ubiquitous.

Now you might ask 'Well gosh we never heard about this before, why now?' And I would agree with that. Again I have been practicing medicine for 47 years now and in my first 30 I don't know that I saw a lot of mold toxicity. I'm certain that I missed it now that I know what it is. I'm quite certain that I did miss that diagnosis and I apologise to all of those patients who I didn't know enough at that point to get it.

22.01 **Alex:** But of course as you say the majority of your patients were improving and so it sounds like there's an increase in exposure that's been happening in more recent years.

22.10 **Dr Nathan:** Correct. So we were looking at it, not only an increase in exposure but an increase in toxicity and, and this is one of my biggest concerns, we live in a world that is so increasingly toxic that our liver's our working so hard to get rid of the toxins we are exposed to that it can't handle mold toxin, or other toxins, like it used to. So 40 years ago if that was the only toxin we were exposed to we could deal with it, now we can't. So it is very definitely an epidemic now and I can tell you, since I have quite a few patients in the UK, I know that you have old, damp, moldy buildings (Alex laughs). And I know that this is an epidemic for, worldwide. There's virtually no one that doesn't have this kind of exposure now.

23.12 **Alex:** Yes and it's interesting what you were saying about the liver's ability to deal with it. I also remember reading in your book that 25% of the population is not genetically equipped to deal with it. So maybe say a bit also about some of the differences because of course there may be circumstances where there are family members all living in the same building, for example, and some are more heavily impacted than others.

23.36 **Dr Nathan:** Correct. Some won't be impacted at all and some will be really sick. So the natural tendency of human beings is to say 'you're sick, I'm not, we live in the same place so this has got to be in your head' and that doesn't allow the understanding that we are all biochemically and genetically different. And although we often quote this 25% of the population has it I think that's often taken out of context. And what I mean by that is I've come to believe that yes some of us are more predisposed to not handling mold toxin but if you're exposed to enough of it I don't care what your genetic says you're

going to eventually get sick from it and I don't think that gets talked about enough because it's not proof positive 'I've got the good genes I don't have to worry about it'. If you wind up in a moldy environment and you don't realise it you can get sick too.

24.39 **Alex:** Yes. Can you say a little bit about the actual biological mechanism by which toxic mold has an impact on someone's body and the symptoms that they experience?

24.51 **Dr Nathan:** How much time do we have Alex?

24.56 **Alex:** (Laughs) OK let me frame my question slightly differently. So for people that are joining us who are perhaps not kind of medically trained but would like to understand, just a surface level understanding lets say, about why toxic mold impacts on symptoms in the way it does. And perhaps you can include in that, you talk in your book about there are some quite unique symptoms that people with toxic mold will experience which there aren't really many others explanations as why they have those.

So maybe it would, could just be helpful way of people identifying this themselves if it's something that could be happening for them.

25.31 **Dr Nathan:** Well that's three questions, where do you want me to start?

25.34 **Alex:** (Laughs) Let's start with a little bit about the actual mechanism, so how is it toxic mold causes symptoms?

25.40 **Dr Nathan:** Yeah, OK. I'm going to give listeners two models to look at. The first model we have is Dr Shoemaker's which he calls the biotoxin pathway and in it he outlines, with precision, how a mold toxin molecule gets into the cell, it effects the nucleus of the cell, it effects the cells ability to communicate in a wide variety of ways, and literally shuts down the bodies ability to balance hormones by its affects on the pituitary. It interferes with the immune systems ability to function by causing a profound and uncontrollable inflammation. The essence of mold toxicity, and Lyme by the way, is inflammation. An inflammatory process that the body does not know how to control because mold, and also Lyme, works on the body in such a way to keep that inflammatory process going and the whole essence of treatment is to calm that inflammatory response. Because all of the symptoms, be it inflammation of the brain, inflammation of the gut, inflammation of the joints, tendons, muscles, ligaments, it's all inflammation. So that's the piece that it triggers.

So Dr Shoemaker has this model which I would encourage readers to go to his website, which is survivingmold.com where he lays out the model and what it means.

The other model, a newer one which I find a bit more helpful, is the model proposed by Dr Robert Naviaux called 'Cell Danger Response', in which Dr Naviaux has put together an understanding of how an infection or a toxin affects the mitochondria, which are the part of each cell which signal danger. And once that danger signal goes off if the body can't turn off that signal it literally goes (makes sound of a ambulance siren) and unless you recognised what the danger is you won't be able to put it out.

This allows us to segway back to what you said when I talk about public enemy number 1. What do we need to treat? If you are treating a piece of the puzzle that is not central to triggering this danger response you're not going anywhere. Not that it's a wrong thing to do, it's that your timing is off. You have to get in sink with what the body wants you to do if you're going to make any progress in moving it forward and the first thing you have to do is to turn off that danger. Either by identifying a toxin, or more, or an infectious agent, or several, because unless the body goes 'ahh yes thank you, you have dealt with that now, now I can turn off the alarm system'. If you don't do that, that chronic inflammatory condition will simply persist and that's what we see in our patients.

29.14 **Alex:** And that's why patients of course can end up going round multiple different practitioners and physicians that are doing on the surface excellent work. They're identifying functionally things in the system that our out of balance. They're addressing those. Their either not coming into balance or they're improving a little bit but there's no change in the patients symptoms.

29.33 **Dr Nathan:** Correct.

29.34 **Alex:** OK. So then coming on to that next piece I was curious about, which is that there are some quite unique symptoms specific to toxic mold. Such as electric shock sensations, ice pick like pains. Maybe say a little bit for someone who is potentially suffering from toxic mold, we'll come to Lyme a bit more in a moment, what are some of the things beyond I imagine seeing themselves in the picture that you've been describing in terms of going from practitioner to practitioner that seem to be doing really great work and nothing seemed to be really shifting and perhaps having some kind of history with some obvious exposure, but perhaps not.

What are some of the symptoms or sensations which might be somewhat unusual that one could identify?

30.21 **Dr Nathan:** OK. So to begin with, any complicated medical illness is such that you ought to think about mold and Lyme. In other words if you have a multisystem process for both of those conditions; fatigue, cognitive impairment, pains of various sorts, headaches, those are de rigeur.

Now specific to mold, and I will add that the co-infection of Lyme called Bartonella can be very, very similar. But for mold you started to point out pains that are electrical in nature, electrical shock, ice pick like pains, a perception of vibration in the body. Meaning nothing is showing externally but internally patients report that they feel something vibrating often in their spine, often in a specific part of their body. Now this is such a strange symptom that unless the physician is open to hearing that a patient is not going to tell you that because they've already told a few people that and that's when the eye rolling began.

So those are quite specific. Other things that you should be looking for, if you've been evaluated by a specialist and they use the word 'atypical' in your diagnosis. Atypical MS, atypical ALS, atypical Parkinson's, atypical Alzheimer's, atypical Rheumatoid Arthritis. What the physician is saying is there are some features that go along with this illness, I don't have a category for it but it doesn't fit very well. So if your physician is saying you have an atypical illness think mold, think Lyme.

Psychological issues. Intense anxiety coming out of the blue with panic attack. Intense depression to the point of despair. A feeling of depersonalisation where you feel like you're not in your body anymore or you don't feel like you're in yourself. All of these are quite typical for both mold and Bartonella. As we've talked about various pains, vertigo, disequilibrium, imbalance, muscle weakness are all fairly classical and one of the big areas are sensitivities. Sensitivity to light, sound, touch, EMF, food and chemicals.

So those are the biggies. And you don't have to have all of those, everybody is biochemically genetically different but if you have any of those think mold.

33.28 **Alex:** You mention sensitivities perhaps you could also say a little bit of a differentiation between toxicity and sensitivity and why recognising that difference can be important?

33.40 **Dr Nathan:** Sure. And they can blur. But sensitivity refers to the reactivity of the nervous system. So that means an over reaction to a stimulus. That could be light or sound, for example, many of my patients with Lyme or

mold, if they hear a car backfiring out the window two blocks away they'll jump. Whereas other people will barely notice that it's there. So sensitivity refers to a reactive nervous system, toxicity refers to what it is saying, that it is literally making the tissues toxic. So you can make the nerves toxic, you can make the muscles toxic, the tendons toxic, the ligaments toxic. There is an overlap, you can be both toxic and sensitive, but it helps to distinguish it because if we're talking sensitivity you need to include in your treatment strategies that will quiet an over reactive nervous system. If we're talking toxicity you need to include in your treatment things that will help your bodies organs of detoxification; the lymphatic system, the liver, the lungs, the skin, the kidneys. You need to help them function better to be able to eliminate those toxins.

35.06 **Alex:** Yes and of course and if someone's got particularly high sensitivity sometimes you need to calm that down before one can tolerate some of the treatments that might be used to tackle the toxicity. Is that how you would see it as well?

35.20 **Dr Nathan:** Absolutely and in fact I think that is emerging as one of the biggest unrecognized pieces of the puzzle for those sensitive patients with Chronic Fatigue/ME who have become so sensitive. So for those patients first recognise what made you sensitive that way and that is almost always mold or Bartonella. So if you are sensitive, if you've got multiple chemical sensitivities or if you over react to light or sound, or EMFs, think mold or Bartonella because it is highly, highly likely that that's what triggered it in the first place and if you don't treat it you won't get well. You can get better doing a variety of things but you won't get well.

36.09 **Alex:** Yes

36.10 **Dr Nathan:** Turning back to that sensitivity the sensitivities we're talking about affect two major parts of the brain; the limbic system and a part that we call the vagus nerve, and the vagus nerve is the 10th cranial nerve, which anatomically is very closely connected to a number of other cranial nerves. So I'll put them in two major different groups; the cranial nerve system, the limbic system.

The limbic system is the part of the brain that deals with emotion and sensitivity and to a certain extent cognition, energy and pain, which is what most of our patients have. So what we're beginning to learn is that most of our patients have a limbic component and you can help them become less sensitive and feel better by starting, by treating the limbic system early on. And just for the listeners to know, OK how do I do that? There are a number of systems that are out there, the one that I have most experience with is the

one put forward by a woman names Annie hopper called “DNRS”, which stands for ‘The Dynamic Neural Retraining’ and in the UK Ashart Gupta has what’s called the Amygdala training programme which is equally good.

37.37 **Alex:** Yes.

37.38 **Dr Nathan:** But one or two of those programme’s is essential in our sensitive patients. They won’t be even able to take what they need to take to get well if they don’t start looking at that early on.

37.50 **Alex:** Yes and indeed just as an aside the work that we’ve been doing for many years at The Optimum Health Clinic, that recognition of what we classify as the Maladaptive Stress Response, and I know that Annie Hopper has been inspired by some of our work. I know Ashok, in fact we used to share a clinic together 16 years ago so I know Ashok very well.

So there’s that work around the importance of calming that can literally be the difference between patients being able to do all of the other work that needs to be done or not. And that was a fascinating piece, Niki who introduced you and I, we used to work together 15/16years ago with patients, her on the nutrition side, and that was an enormous breakthrough when we recognised how important it was calming that down. I much appreciated your kind of recognition as part of that, of course though you can calm down that sensitivity piece but if you’re not dealing with on a physical level the underlying pieces that are also happening then of course you’re only going so far in the process, which is just a good piece.

You’ve mentioned a few times Lyme and co-infections maybe just for people that are joining us say a little bit about, and I know that you may respond by saying how long have we got because I know this is an enormous area again and of course over the last few years Lyme has benefitted from some actually quite decent PR in terms of there being more awareness and understanding although I recognise that we’re still at very early days in many clinicians experience in terms of working with it. But maybe just say a little bit about, when we refer to Lyme or co-infections, what specifically we’re talking about for those that aren’t aware and some of the ways that one might begin to identify that as part of their experience?

39.30 **Dr Nathan:** Sure, and again thank you for emphasizing the importance of quieting the limbic system in our patients. We too have recognised that that is central to people who are struggling with making progress because if a body does not feel safe neurologically, very simply it can’t heal. And so we can come back later to the vagus nerve piece as well, but let me answer your immediate question about Lyme.

So Lyme disease, and when I use the term Lyme disease I'm usually referring not only to the infection with the bacteria Borellia but I'm also referring to the co-infections of Bartonella, Babesia, Ehrlichia and many other, infectious components that accompany Lyme disease, which are somewhat different and separate from each other and make it even more complicated. And I will say that for those of you in the UK you are working at a great disadvantage in that most of the authorities in the UK to my knowledge do not yet embrace the prevalence or even existence of Chronic Lyme Disease. Not that we're that much ahead of you but a little bit.

40.56 **Alex:** Yeah I agree with that.

40.58 **Dr Nathan:** But only a little bit. So those of you that are being told that there is no Lyme in Europe or the UK I'm going to massively disagree with that. Since I treat quite a few patents from UK and Europe and literally all over the world, whether the authorities recognize it or not it is here.

41.22 **Alex:** You don't need permission from the Government to recognise what's going on right.

41.27 **Dr Nathan:** Apparently we do (Alex laughs) because I know that in some other countries like Norway, for example, there's a major thrust to not even allow a discussion of Lyme Disease to occur in the medical world. So I don't understand the implications but there is a growing weight of evidence that is burgeoning that Lyme is an epidemic. We need to take it into account, it is very real and if you can't get somebody to take you seriously you may have to go elsewhere to make that diagnosis (Alex: Yes) because you may not get any encouragement from a conventional physician, and that's true in the United States as well for this illness.

So coming back to that, to your basic question. Lyme Disease can cause, again, fatigue, joint pain, cognitive impairment and neurological events and oh my gosh the same things we talked about before but not with the same specificity. So if you are very ill and have multi system components, Lyme Disease is really something you ought to think about. Unfortunately testing for Lyme Disease is not even as accurate as testing for mold and experts argue about how accurate it is and which tests are better than others. And I, and I alone will not put that argument to rest but you need to get some kind of testing, usually in the form of a Western Blot here in our country, the Igenix laboratory does a much better job of it than anyone else does, and in Europe you've got the Armin laboratories

43.35 **Alex:** Yes that's right in Germany, that's right.

43.37 **Dr Nathan:** That does quite a decent job of it. So, there are laboratories that can test you for Lyme and co-infections that are certainly worth doing. Am I answering your question?

43.47 **Alex:** Yes you are that's extremely helpful and I'm glad that you mentioned the challenges with testing because I think a lot of people, where they've perhaps read something online and gone 'well perhaps I did get a tick bite at some point', have gone to their GP, have managed to persuade them to do a Lyme test and it's come back as effectively a false negative but they've not realised that that's what it is.

When, perhaps let's just say a little bit around the relationship between mold and Lyme and co-infections because obviously there can be a kind of weakening, a co-weakening let's say, of the system. So maybe speak a bit to that and then I'll ask you some questions about some of the ways in which you work with these patients to find some resolution.

44.29 **Dr Nathan:** OK. I first want to emphasise that you can get Lyme Disease and co-infections from other sources than ticks. They can be carried by fleas, flies, mosquitos, Lyme can be sexually transmitted. So if, if folks are thinking 'well I've never had a tick bite so I certainly don't need to be thinking about that' mmm, think again. That may, that may not be true.

Now to come back to your question about the relationship between mold and Lyme, each of them profoundly weakens the immune system. So that if you have had mold exposure that will make you far more prone to having a Lyme type illness because your immune system can't fight it off. Conversely if you have Lyme and you are exposed to mold you are far more likely to be affected by that as well because, again, and while this is controversial, the part about mold that some people don't understand is that, if you are exposed to it and your immune system is weakened it can actually start growing in you, in your gut and sinus areas, making toxin ongoing.

So if you simply move out of a moldy environment, so let's say OK I know I live in a moldy home I'm going to go to a Caribbean Island for a month and then I should feel better. Well it might be a very nice vacation (Alex laughs) but you might not feel better because if you're body is making the toxin ongoing there may be no difference. And the important thing to keep in mind is once exposed you may carry that toxin with you unless you treat it.

So there's a very intimate relationship between Lyme and mold, in fact one of the things I'm finding is that those of us who came into this field from the Lyme world, which is most of us, tend to think Lyme when presented with a

very complicated patient, and only when that's not working do we start to think about mold, and my message to practitioners is if you've got a complicated patient think Lyme and mold early on because you will probably need to treat the mold first if you're going to make any progress with the Lyme.

47.02 **Alex:** Makes absolute sense and I guess again it's that, it's that evolution of understanding. It's almost like it's the next piece in what you were describing at the start of getting closer and closer to recognising what you would call public enemy number one. What is the piece that has to be attacked at the beginning of that process.

So when you're, when you're presented with a patient and you've identified, let's say, there's both mold and there's Lyme or Bartonella or some kind of co-infection that's going on what, how would you start to approach that in terms of treatment? So what would be the early steps in that treatment process? And I appreciate of course it's going to enormously vary from patient to patient, but yeah, how would you start to approach that?

47.47 **Dr Nathan:** So first I want to emphasize that the major component of my initial evaluation is focusing on symptoms. And the major purpose of that is so that whatever I think is public enemy number one, needs to explain virtually everything that my patient is complaining of. If it doesn't I am not in the right place.

48.17 **Alex:** It's almost like it has to be a grand unifying theory almost that kind of ties together all the jigsaw pieces.

48.23 **Dr Nathan:** Right. If possible. It usually is possible. So, for example, for our patients who are being told that their illness is Epstein Barr virus and methylation, if you are faced with the complex symptom presentation that is more than fatigue, more than brain fog but consists of some of these key symptoms that we have mentioned; extreme anxiety or depersonalization, or depression or vibration sensations or an increase sensitivity to everything. If you're looking at that complex picture Epstein Barr and methylation do not explain it. They explain a little piece of it. So using critical thinking skills you would have to go back to that and say that's not the answer, I need to find something that would really explain the majority, at least, of my patient's symptoms.

So when I take a history I am looking for as detailed a description of my patient's symptoms as I can because that will inform me where I need to start. Let's say I've determined that a patient has both mold and Lyme, or any component of that, most of the people that I see, and this makes me a little

different, are extremely sensitive. Because I have a reputation for helping patient's with extreme sensitivity my colleagues have gone out of their way to refer those patients to me (Alex laughs). But because of that it's taught me how to work with them.

50.10 **Alex:** Yes.

50.11 **Dr Nathan:** I know that doesn't sound like a gift but it is because I have learnt how to help the majority of those patients. So my sensitive patients cannot possible treat both mold and Lyme simultaneously. They're not strong enough, they're too sensitive, they're too reactive, I've got to do some homework to quiet them down first. Given those choices mold is the correct thing to treat first 99% of the time.

50.42 **Alex:** Very interesting.

50.44 **Dr Nathan:** And I say that clinically. If you, first of all it's easier to treat. It doesn't involve the use of antibiotics, the materials given are less hard on the body, less of a strain on the body, and if we take the mold layer off we may discover that there is not Lyme layer under it, so you may not need to use a elaborate long term antibiotic approach if the mold there is the whole picture and we didn't know that because they look so similar.

So I start with mold and typically I will start with mold and three of the things that mold triggers because I may need to pre-treat those before I can even get started on the mold. And those are, we talked about one of them, the limbic system, the vagus nerve and the last is mast cell activation, which both Lyme and mold, mostly mold, will affect the mast cells of the body to be hyper reactive to a variety of stimuli and release mostly histamine into the body. And when histamine is released into the body in excess, now we get all of the same symptoms that we're worried about but worse. So for patients who have noticed, for example, that immediately after eating or drinking something they begin to sweat, have palpitations, have abdominal pain, cramps, diarrhea, itching, hives, tachycardia, that's a tip off that they have a mast cell activation component and they're going to need to look at that as well.

52.37 **Alex:** And just to comment on that specifically as well, it may not be any consistency in terms of the food that that person is eating, for example, it could simply be more, their system is more aggravated at that time

52.51 **Dr Nathan:** That is precisely correct. So that, it isn't a food allergy. You could have a food allergy also, but this is not food allergy, it's as you are suggesting it's symbolic of the reactivity in the mast cells at that moment. When they're really reactive patients can react to drinking water with those

same reactions. You know you hear someone say sometimes when I drink water I get those symptoms and that's again when physicians who do not understand this will go 'well know I know you're a nut case' (Alex laughs) because nobody reacts to drinking water. And the truth is oh yes you can and that is diagnostic of a mast cell issue if you will open up your mind to believing your patient, which is really key here.

The whole key is, a patient they're, you know there's a few malingerers in this world but having practiced for 47 years I can count them on one hand. The vast majority of human beings simply want to help me understand what they are going through and they are accurately portraying it and if I am listening to it with an open mind and an open heart they're going to actually tell me the diagnosis if I'm paying attention. If I come to it with 'oh brother, oh this person belongs with a psychiatrist not me' that person will not only be disregarded but they will now have PTSD caused by a physician based on being disbelieved when they're simply trying to tell their truth. And that's a very real problem here.

54.38 **Alex:** It really is, it really is, and I think if one's going to make up symptoms one would do a better job to make them up for an illness that has a bit more cultural respect than these fatigue related conditions. So, so you would, in a sense what I'm hearing you say is there's almost a bit of a checklist in a sense you're going through here. You're looking at is there mast cell activation, is the limbic system over stimulated, you are then coming in with, are you coming in with binders at this point, at what point are you starting to use things to start to draw the toxicity out of the body?

55.12 **Dr Nathan:** Well once I've answered the questions of is it mold, if it is do I need to quiet down systems that will not allow me to give binders. Once I've clarified that or treated that then I will treat with binders and I will base their treatment on their urine mycotoxin testing. Meaning the urine mycotoxin test has revolutionized our ability to know which molds are in that body and which binders would be most affective. So it not only nails the diagnosis it also gives me a blueprint for how to proceed with my treatment.

55.55 **Alex:** And I think that's a very valid point because I think that sometimes the danger of having a little bit of knowledge is someone might think 'oh I think I have some toxic mold, I need to use some kind of binders, oh I'll just get Chlorella or something like that. That's a binder that will do it'. But of course what you're saying is for, for different sorts of issues here there are different binders that are more likely to be effective.

56.17 **Dr Nathan:** Exactly, correct. And if you are sensitive and you take an ordinary, quote on quote, dose of Chlorella you can throw yourself under the bus in seconds.

56.29 **Alex:** Right, right.

56.30: **Dr Nathan:** Meaning, it says on a chlorella bottle take 15 tablets twice a day.

56.39 **Alex:** (Laughs) That's a lot.

56.40 **Dr Nathan:** I have very, very, very few patients who can do that. Three a day is a good dose. I have patients who can take a quarter of a tablet every other day, that's the best that they can do. So please, for those of you who think you can self treat, you really need to be in the hands of someone who understand this and how reactive you can get because if you're reacting to a binder what that means by definition is that it is mobilizing your toxin faster than you can get rid of it, and you will simply get more toxic. And you cannot fight your way through it, this is not mind over matter. Adding to the dose of arsenic and strip lining your body will not make you less sick.

57.27 **Alex:** (Laughs) Right. And that's one of the things that really came through for me in reading your book, and some of your other pieces online as well, is the depth of understanding you have and the sensitivity that you have to going at the speed of the patients system and not seeing that as something to override. And I, in fact I think it might be one of the first case study that you share at the beginning of the book where you talk about the period of time to start to build up and that there's a sequence to it, where there are certain things that might not be tolerated and then you calm certain things down. Then they are tolerated in tiny amounts, then something else comes in which means they then, they can tolerate that in greater detail. So that sequence and sensitivity being such a crucial part of that collaborative journey between the patient and the physician.

58.16 **Dr Nathan:** Correct, and that particular patient is an excellent example. It took us months, almost a year, before she could even tolerate miniscule dosages of binder. It took her months to a year plus before she could work her way up to a decent dose of antibiotics for Bartonella. And so, it took us maybe three years to get her to point where she was in a wheelchair, to the point where she could get up and go to Church and go to the grocery store and not have seizures walking down the aisle to which she was chemically sensitive. Now I just, she emailed me literally the other day, and showed me that she had just completed a 30 mile bike trip around Lake Tahoe, and with no

limitations and was completely well. But this is a woman that we were exquisitely slowly in the beginning because we could not move her any faster.

59.24 **Alex:** I like the way you say exquisitely rather than excruciatingly (laughs) I thought that was the word you were going to use. I'm mindful of time but perhaps you could just say a few headlines around, around Lyme and co-infections. You mentioned the importance of having antibiotics and having kind of sometimes prolonged use of those as being a key part of that piece, we don't have a lot time but I'd like to hear a few signposts for people around some of that.

59.50 **Dr Nathan:** Well the first, the first thing I would say which would be self-serving is read my book. The new book, simply called 'Toxic: Heal your body from Mold Toxicity, Lyme Disease, Multiply Chemical Sensitivity and other Environmental Exposures'. I do lay it out in there and I appreciate you saying that it's readable; I had hoped it would be.

1.00.18 **Alex:** it's extremely well written and I don't say that lightly, yeah.

1.00.20 **Dr Nathan:** Thank you and I do think that that will really help a lot of patients with Chronic Fatigue/ME to really understand the bigger picture of what we're talking about now and I don't think I can emphasise enough that you need to get into the hands of a healthcare provider who knows what they're doing. This is not a short treatment, this is not a simple treatment, it requires, as you are clearly seeing, a very profound relationship between the healthcare provider and the patient. It is absolutely collaborative and tweaking would be the word that I would use that has to be done constantly to keep moving them forward, recognising that OK we've crossed this little threshold now we can move onto that.

This can't be done in the old model of medicine where you come in for a physical examination once a year. This requires regular visits, emailing, phone consultation, for you to really help the healthcare provider understand 'ah I took that supplement this is what happened' that needs to be factored in immediately not six weeks from now.

So the basic treatment for mold is to analyze your environment and either clean it up or move, if that's possible. Use the correct binders based on your urine mycotoxin testing and if you need to, which is most of my patients, you need to take anti-fungal medication and biofilm dissolving agents to get the mold out of your sinus and gut. If there is a Lyme layer underneath you need to identify with as much precision as you can which one is it and you have to be in sync with that immune system.

So yes someone might have Lyme but they might need to treat the Bartonella first and the patients symptoms will guide you. But again it's like peeling layers of an onion, which is, as the patients symptoms shift, their body is literally telling them and you 'Ah I've shifted, I've got this under control now. Now this is what I'm wrestling with and this is what I'm reacting to'. And we go 'OK great now I know the next step'. And it's a, until you have peeled off enough layers that that immune system has recovered, then that patient can heal.

1.03.18 **Alex:** Fantastic. Before we, we talk about how people can find out more about you and your work, is there anything else, Dr Nathan, you, you feel is crucial that we haven't covered to this point that you'd like to add?

1.03.30 **Dr Nathan:** Well I think this will overwhelm most people (Alex laughs) but did you want me to add to that?

1.03.36 **Alex:** No. No I feel satisfied you've covered all of my questions I was just mindful sometimes people feel at the end there's one piece that's been missed but I think we've covered everything.

So the people that want to find out more about your work, you've mentioned your book Toxic, which I think is an excellent place for people to find out more but if you could also mention your website and any other resources that people that want to understand more about how they can either work with you or follow your work.

1.04.01 **Dr Nathan:** OK. Well unfortunately I have been so swamped with requests for consultations that I'm taking really no new patients right now. I'm really full and I'm doing a lot of phone consultations, the primary goal of phone consultations is to work with practitioners to teach them what I know. I'm also doing a lot of teaching at medical meetings and I'm doing a mentorship programme with physicians as well where we use a Go To meeting format and they present cases and I help them dissect those cases.

So my primary focus is on teaching other health care practitioners so that more and more people can do this work, and that's central. You can certainly go to my website, which is very simple neilnathanmd.com and there'll be more information there. I do have a newsletter that is available there that goes over a variety of subjects and I have a whole bunch of radio podcasts that are all on archived on that site.

If you are looking for a practitioner who understands how to do this the new organization ISEAI, and if you go to iseai.org it's a fabulous new organization whose goal is to certify and teach healthcare providers how to work with all of

these conditions. So that includes mold, and Lyme and heavy metal toxicity and environmental toxicities and how to understand them, how to understand what to treat in what order, how to evaluate them, how to diagnose them. And so on the ISEAI website patients may be able to find a practitioner near them who has the ability to really help them go through this journey.

1.06.10 **Alex:** Fantastic. Dr Nathan thank you so much for your time. I've greatly enjoyed this conversation and I think it's going to be immensely valuable for people, so thank you very much.

1.06.19 **Dr Nathan:** My pleasure I hope this is helpful to all of your listeners.

1.06.25 **Alex:** Thank you.

1.06.26 **Dr Nathan:** Thank you.