



**More than just an allergy problem: the profound impact of
mould toxicity on mental health**

with Dr. Neil Nathan and Dr. Jill Crista

[The MindHealth360 Show](#)

Episode Transcript

Host: Kirkland Newman

Guest: Dr. Neil Nathan and Dr. Jill Crista

Kirkland Newman:

The MindHealth360 Show is brought to you by the London Integrative Mental Health Clinic, which provides the full 360 degrees of health, diagnosing and treating the root causes to your mental health symptoms. To find out more, or if there's anything in this episode you'd like help with, please find us at integrativementalhealth.com.

Dr. Neil Nathan:

Let's focus on some specific brain areas that are more affected by that inflammatory process than others. We have the limbic system, which is the part of the brain that controls emotion and sensitivity. We have the vagus nerve, which, with the limbic system, regulates and monitors our perception of safety; whether we feel safe in our body or safe in our environment. The vast majority of our patients with mould toxicity don't feel safe in their environment or in the world. Many of them have developed extreme sensitivities. Chemicals, food, light, sound, touch, EMF.

Kirkland Newman:

Welcome to The MindHealth360 Show. I'm Kirkland Newman. If you, your loved ones, or clients suffer from mental health issues, such as depression, anxiety, insomnia, poor memory, poor attention, mood swings, exhaustion, et cetera, I interview the leading integrative mental health practitioners from around the world to help you understand the root causes of these symptoms, many of which may surprise you, and suggest solutions to help you heal. If you like this interview, please do subscribe and forward to others who might find it helpful. If you want further information, please go to www.mindhealth360.com, or find us on social media.

Kirkland Newman:

Dr. Jill Crista and Dr. Neil Nathan, thank you so much for being here on the MindHealth 360 Show. I'm very grateful to have you both. Dr. Neil Nathan and I already did a wonderful interview on Lyme and mould a few months ago, actually, which was very well received. Dr. Jill, first time I have you on the show, and I'm very, very happy to have you here.

Kirkland Newman:

Dr. Neil Nathan has been practicing medicine for 48 years, and has been board certified in family practice and pain management, and is a founding diplomate of the American Board of Integrative Holistic Medicine and a founding diplomate of ISEAI. He's written several books, including *Healing Is Possible: New Hope for Chronic Fatigue, Fibromyalgia, Persistent Pain, and Other Chronic Illnesses*, and *On Hope and Healing: For Those Who Have Fallen Through the Medical Cracks*.

Kirkland Newman:

His current medical practice is in Redwood Valley Clinic in Northern California. He can be contacted through his website, neilnathanmd.com. It is worth saying that he has been treating chronic complex medical illnesses for 25 years, and Lyme disease for the past 15 years. He is really very well known for specialising in patient's who've become so sensitive and toxic that they can no longer tolerate their usual treatment. He's very good at helping them to recover.

Kirkland Newman:

Dr. Jill Crista is a naturopathic doctor, a bestselling author, and internationally recognised educator on neuroinflammatory conditions, such as mould, Lyme, PANDAS and PANS, and post-concussion syndrome. She is the author of *Break the Mould: Five Tools to Conquer Mould and Take Back Your Health*, and supports mould sick people through her Mould Canary Membership. She also provides online training for medical practitioners wanting to become mould literate.

Kirkland Newman:

Really grateful to have you both here because I think when we think of mental health issues, depression, anxiety, insomnia, cognitive decline, poor memory, poor attention, we don't often think of mould. We think maybe of many things, but mould is not the first thing that comes to mind. So what I'd love to hear from you both is, in your experience, what made you both gravitate ... because Dr. Neil, you're a family practitioner, Dr. Jill, you're a naturopath, you treat everything... what made you both gravitate towards mould? Why has this become such a crucial issue for you in your practices?

Dr. Neil Nathan:

Jill, why don't you kick it off.

Dr. Jill Crista:

Okay. Well, for me, I ended up starting my practice, which was a primary care practice in southern Wisconsin, which ended up being a Lyme endemic area. I didn't realise that and I didn't know a lot about Lyme disease. But with functional naturopathic medicine, when you identify the cause and you treat the cause, people tend to get better. It's very elegant. I was having success with the majority of my patients using those principles, except this other group of people, which ended up having chronic Lyme. So then I became a Lyme specialist. Again, applying the principles of find and treat the cause, people were getting better, except this other group of people that were doing everything right. These are the hardest working patients.

Dr. Jill Crista:

When someone comes to a practitioner like us, they know they're going to get homework. They know that and they're willing. They wouldn't come to us unless they were willing, hopefully. These hardworking patients have thought, "what in the world is going on? What am I missing?" In one of those patients, they found black mould in his home, *Stachybotrys*. I went to his home and did the whole tour with the inspector, and it was my very first Pandora's box opening of, "oh my goodness, this mould thing is so much bigger than an allergy problem. This is so much bigger than what I understood". When I hit the research, I was able to identify mould-type symptoms in all of those people that were, what I'll call chronic Lyme long haulers, and we just weren't getting to the bottom of it. So that's how I entered the mould world.

Dr. Jill Crista:

I'm a digger, so I hit all the research and started applying naturopathic principles and sometimes pharmaceutical antifungals, and watching these people turn around as if it were a miracle, but it was because they had done all the homework up to that point. We were able to see really impactful change. It was very, very rewarding. So then you become the mould lady.

Kirkland Newman:

Absolutely.

Dr. Neil Nathan:

Well, apparently, I'm the mould guy, so I think we'll make a good team here, Jill. My entry into the mould world, somewhat similar. I was considered by many people at this point in my career an expert on chronic fatigue and fibromyalgia and Lyme, and was having, like Jill, a large number of patients who did everything I asked them to do and they weren't getting better. Then one day, a woman came into my office and she plunked a book called Mould Warriors by Ritchie Shoemaker on my desk and she said, "Read this." I have a stack of books always on my desk that I'm reading, so I stuck it on top of the stack and said, "Okay, I'll get to it." She said, "No, you don't really understand. I am paying you at this visit for you to sit down and read this book now." Great, if people will actually pay me to read, this is a great way to earn a living. I can get behind this.

Dr. Neil Nathan:

Fortunately, the heart of Shoemaker's book began early on in the book where he described what he called the biotoxin pathway. I read the biotoxin pathway, and I went, "This guy is brilliant. He has found answers that I've been looking for for a long time." I literally called his office from my office that day and said, "You have some time? Can I fly out and see you? Can I study with you?" Ritchie, who is a bit of a character, looked at me suspiciously over the phone and said, "Who are you? Why do you want to come out and visit with me?" I said, "Because I'm reading your book and it's brilliant, and I want to study with you." So he was okay with that.

Dr. Neil Nathan:

The next weekend, I flew out to Pocomoke, Maryland, which is on the Eastern Seaboard, it's out in the middle of nowhere. I spent time with him and we became friends. I learned his method. That evolved into my recognition at the amazing number of people with mould toxicity that weren't getting diagnosed, that no one had any idea what to do with, and that, like Jill, I plunged into my research and my reading. That's evolved into my understanding of mould toxicity.

Dr. Neil Nathan:

Once the light bulb turned on and one recognises, this is not rare. In the United States, it's estimated that as many as 10 million people are currently suffering with mould toxicity, and so it's not rare. Kiki, in the UK, having quite a few UK patients in the wet, damp, old buildings, mould is very prevalent. It's something that we really need to be honoring and looking at and treating, because we can.

Kirkland Newman:

In terms of mental health, what are the ways that mould can impact our mental health? What are the symptoms that you associate with it? Also, what is the mechanism of how mold can impact our mental health?

Dr. Neil Nathan:

Again, Jill, why don't you start? We'll tag team here.

Dr. Jill Crista:

Sure, all right. Well, mechanism might be the easiest place to start because it does help explain some of the symptoms. It causes a lot of inflammation. We know that systemic inflammation expresses in the brain. We have this idea that the blood-brain barrier has this big wall and nothing can get past, but that just isn't the case. Some of these mycotoxins can cross the blood-brain barrier and impact the brain in that way, inducing mast cells, inducing the immune system of the brain. We see they can change how macrophages do their munching and eating of toxins. So it alters all of these systems that we have in place.

Dr. Jill Crista:

Then there's a lot of gut breakdown, which we know the gut-brain barrier can happen. So we can actually get a leaky brain, so things can get into the brain tissue that otherwise, with a healthy gut or a healthy blood-brain barrier, wouldn't be able to get in there. So we have many, many impacts that are happening at one time. I think the number one thing that I'm seeing is anxiousness, as far as a mental health symptom. I'd love to hear if Neil's seen this, what level. But I'm careful not to say anxiety because I think that people have an idea of anxiety being anxiety disorder. Something I need medication for. That's just not really it. While that can happen, the majority of anxiousness that I'm seeing, it's more of an inner sense of unrest. Something's not okay. I'm not okay. My world is not safe. It can also create a belief system of that, that you come into the world now with, the world is a dangerous place. I don't know, Neil, did you want to ...

Dr. Neil Nathan:

Sure. I can expand on that. Number one, that's absolutely correct. Inflammation is the key. Let's focus on some specific brain areas that are more affected by that inflammatory process than others. So, we have the limbic system, which is the part of the brain that controls emotion and sensitivity. We have the vagus nerve, which with the limbic system regulates and monitors our perception of safety, whether we feel safe in our body or safe in our environment. The vast majority of our patients with mould toxicity don't feel safe in their environment or in the world. Many of them have developed extreme sensitivities, chemicals, food, light, sound, touch, EMF, every type of sensitivity imaginable, that makes them even more concerned about the safety in their environment because stimuli that don't affect their neighbours or friends or family, really affect them powerfully, so that leaves them unable to function.

Dr. Neil Nathan:

When we add to that the vagal nerve dysfunction, which controls the entire autonomic nervous system, it controls intestinal motility, which ties into the gut-brain axis duality, it ties into our ability to function either in fight or flight or shutdown mode by the way we react to these stressors. So that between these two areas, the vagus nerve and the limbic system, this creates an extreme sensitivity on the part of our patients in which their brain, this is not psychological, this is neurological, their brain literally goes, "I'm not sure that what you're doing is safe, and so I'm not going to let you do it". So, we need to address those issues early on in treatment because they may not be able to take the substances that we need to give them to treat the mould successfully.

Dr. Neil Nathan:

As you correctly point out, the mast cell activation process adds another level of inflammation to an already inflamed system here. So, what I see, as you do, Jill, is extreme anxiety to the point of panic, severe depression, OCD behaviour, and severe cognitive impairment, particularly difficulty with word finding, cognitive functions, like executive functions, using words and numbers, being able to focus -- what we call brain fatigue, where someone who used to be able to multitask can't anymore. Now they don't even trust that they are correctly doing what they have known how to do their whole life. These are extremely common with mould toxicity. I would say that the vast majority of my patients have some component of that. It's rare when they don't.

Kirkland Newman:

It's fascinating because I was reading in Jill's book, which was something I'd never heard, is that Dale Bredesen, who is the Alzheimer's guy, talks of mould toxicity in the form of inhalation Alzheimer's. Basically, he talks of a category of Alzheimer's, which isn't true Alzheimer's, which is mould toxicity, which manifests as Alzheimer's symptoms, such as loss of words and loss of memory, et cetera. I found that fascinating.

Kirkland Newman:

There are a couple of lead-on questions from that. The first one is, how does this work? I mean, if you can explain to us the difference between mould, mould spores, mycotoxins, I think that would be helpful because I know there's quite a difference there, and so people might not be familiar with that. Second of all, how do these mould spores or mycotoxins cause that inflammation?

Dr. Jill Crista:

That is such a great question because I think that when you look at the CDC's definition of mould-related illness, they will define it as basically spore-related interactions with the body. That's going to be things like sinusitis, asthma, hypersensitivity, pneumonitis. There's no in between, you go from that to aspergillosis of the lungs. The way that I see it is, and I know Neil as well, a much broader continuum by looking at all the other ways that mould can harm a body.

Dr. Jill Crista:

Just on the spore story, there are spore fragments. After mould dries and dies, it can break off these little friable fragments in a form of 500 to 1. So 500 fragments to 1 spore. These little fragments are ultra-fine particulates. So they're in the PM 2.5 environmental respirable toxin category. They can irritate the body like asbestos does. So they get into the lung tissue. They can stay ever suspended in the lungs. Even a jogger, breathing in and out really rapidly, you get this little spinner in the lung that just stays there. So it can create this persistent irritation, agitation, and affect the surfactant in the mucosal linings of the respiratory tissue. So that's the spore stuff.

Dr. Jill Crista:

Then there are toxins or chemicals that happily living mould will secrete. This is things like mycophenolic acid, aldehydes, alcohols. I have a joke, I'm like, breathe mouldy air, get drunk because when you're breathing them in, your body has to take them in and deal with it. Microbial BOCs, that's when we see people get really chemically sensitive. These are the types of things that can go through building material, even if the spores are locked behind that building material and you don't have any interaction

with the spore or the fragment, you can be getting mycochemicals, so to speak. I call them mould farts in my book, just trying to keep it light. Just happily living, metabolising mould and it's just off gassing these things.

Dr. Jill Crista:

But then there's a whole other component called mycotoxins that are made by mould that want to be competing for its territory. So it starts to try to gas bomb out other living things. The intention of mycotoxins is to harm other living things. We're not the target, but we get hit in the crossfire. These are very ultra-fine chemicals as well, so they can come through building materials, such as flooring, roofing, dry wall. It comes right through those materials because it's ultra-small. They catch onto ultra-fine particulate and dust and things in our air, and now that becomes an air-retentive toxin. That goes right into our bloodstream through our respiratory mucosa, through the lung tissue, the alveoli, which are the smallest parts of our lungs. That gets into our bloodstream, and now we have a toxin problem.

Dr. Jill Crista:

Those toxins can affect our own flora. Just by interacting with those toxins, our own flora will start to defend its territory because if you think about the intention in the toxin is, the message is, I'm coming to invade you. So our own flora goes from being a happy sinus biome or microbiome into a defensive status. You add some vagus nerve problems in there where someone's in fight or flight or freeze mode, now you have, your inner microbial messaging is, this system is under threat. So it behaves completely differently.

Kirkland Newman:

Okay.

Dr. Jill Crista:

Did I hit it all, Neil?

Dr. Neil Nathan:

I think you're doing great. I think the take home message is, we inhale it. As Jill is telling us, it's an inflammatory soup that we're inhaling. It isn't just a spore, it's the spore, the fragments, the mycotoxins, the VOC. There's a whole bunch of protein, rich materials. There's a bacterial species called Actinomyces. What we call mould is really this inflammatory soup. All components of it have an inflammatory effect on the body. Teasing it apart isn't helpful. Calling it mould toxicity is really the right way to look at it because that's really what's happening here.

Kirkland Newman:

It's a complete thing. I mean, it's interesting what Jill was saying about how our own micro flora sees it as a threat, and then starts to compete with it. In terms of the inflammation, is it our body that actually starts to produce inflammatory chemicals to fight off the mould toxins? Is that how it works?

Dr. Neil Nathan:

Yes, and it's more complicated than that. The nature of mould toxins, I'm going to just talk about the mycotoxins because we can measure them most easily, a simple urine test can give us the information we need on mycotoxins. This was what I originally studied with Dr. Shoemaker in his first book, *Mould Warriors*. He put together this very clear step-by-step process by which the mycotoxin binds in fat cells to specific receptors, which triggers reactions, which in turn in the brain shuts down leptin chemistry, shuts down VIP chemistry. There's this domino effect in which the pituitary gland is no longer functioning properly. Our hormones aren't functioning properly. Our gut is affected. Our pain receptors are affected. We tend to have more pain than we did before.

Dr. Neil Nathan:

It leads to a persistent inflammatory reaction that we are losing the ability to shut down. As long as those toxins stay in us, they continue to fire up this inflammatory process that unless we shut it down, we are going to be abjectly miserable for a long period of time.

Kirkland Newman:

It's very interesting. The other thing that's interesting is, when you were talking about feelings of safety and how this mould toxicity makes us feel unsafe, it reminded me a lot of the trauma and nervous system responses. What I find complicated as the patient/lay person is, and I'm sure what you guys probably find complicated as well, is how do you isolate what is causing this? Because the mechanisms are similar depending on the root cause. So it could be childhood trauma, it could be heavy metal poisoning, it could be Lyme disease or certain other infections. How do you isolate mould and say, "Okay, well we know it could be all those things," but as practitioners, how do you narrow it down and say, "Okay, this is mould,"?

Dr. Jill Crista:

Fantastic question. Such a difficult question actually that I had to create a questionnaire for myself in practice because I was having a very difficult time determining that very question. Dr. Horowitz has created the Lyme-MSIDS Questionnaire, and I use that as an inspiration. So I was using that every day. It still wasn't pulling out or teasing out who of those chronic Lyme patients also had mould. So there are some things that are different about Lyme disease than are about mould, but they look so similar. The Venn diagram of both of these conditions is so similar that they could both be considered great imitators.

Dr. Jill Crista:

My experience with mould is that, whatever your genetic and nutritional, whatever your achilles heel is, it's just going to aggravate that. So every person displays those symptoms a little bit differently. I would say it's more the rule than the exception that every person in the home is going to have a slightly different expression of that mould related illness, or mould related exposure. I'm not sure, Neil, are you seeing that same thing?

Dr. Neil Nathan:

I am. I would answer Kiki's question a little bit differently, which is, all the things you mentioned are profoundly interrelated. So, your childhood experiences set your limbic system and vagus nerve and perception of safety at a certain area. With each succeeding stressor or experience, it makes you more

and more vulnerable to being affected by the stimuli that are going through you. So, what you experience in childhood or later years, profoundly affects whether or not you're going to get mould toxicity or Lyme disease because they affect your immune system. It affects the vulnerability of your immune system.

Dr. Neil Nathan:

So, when you ask, how do you sort it out? It's usually not one thing or another, it's usually 'and'. Then it is the skill of the practitioner to orchestrate, what is my patient's comfort level with how I approach this? In general, even if patients have had a significant amount of therapy in their life, their general approach is that they would prefer the issues to be on the physical plane. I usually start with the physical plane because that's usually the place of greatest comfort for my patient. The physical plane will usually mean the patient has a toxin, like mould.

Dr. Neil Nathan:

But although we're talking about mould with some exclusivity, keep in mind that when we talk about toxins, we really need to be talking about what we call toxic load, which is the cumulative accumulation of toxins to which we are all exposed until it reaches a critical threshold at which point the body can no longer function at a normal level anymore. So, you may go on for years with toxic exposures, and do okay until something happens. That could be a stress, that could be surgery, or childbirth, or a loss of a very important person to you, or any of those things, or it could be a significant exposure to mould, or a tick bite in which you get exposed to a wide variety of infectious illnesses, not just Lyme, but the co-infections that go along with Lyme. So, everything is causing everything else here.

Dr. Neil Nathan:

The mould toxicity weakens the immune system and predisposes to Lyme. Lyme weakens the immune system and predisposes to mold. Stress predisposes to everything. Sorry, not something I want to laugh about, but that's the reality that we're working with. Your question, Kiki, is excellent. It is the skill of the practitioner to tease these apart keeping in mind the comfort level of the patient as to what you do first. There is no algorithm that works. You can't just plug into, okay, you've got this, then I do this, then I do this, then I do this. You can do that. For many patients, you won't be working at the level that they want you to. You have to be meeting that patient where their perceptions and needs are.

Dr. Neil Nathan:

Yes, we can impact that, but we've got to include what they think is important. So for many of my patients, later in treatment, we're going to need to get back into going over childhood trauma and work on that. That's going to become important, not on day one. On day one, what these ill patients want to hear is, "I know what you have and I know how to treat it, so let's get started."

Kirkland Newman:

I think that's really true. I was talking to a patient the other day, in fact, who was a lady who came to me. She was very interested in the genetics of mental health issues, and the nutritional factors, and all that. Only after a while of speaking to her that it became clear that she had a lot of childhood trauma. But it was a lot easier for her to focus on the biochemistry. I think for all of us it is in some sense easier. That's one of the things I love about functional medicine and integrative psychiatry is that you can really focus

on the biochemistry because there are downstream effects of the trauma, and there are a lot of biochemical effects.

Kirkland Newman:

Equally, what's interesting is that, in some ways, you could just have mould poisoning, but then that makes you susceptible to everything else on top of it. So, you're right. One has to be with a very skilled practitioner. I know you guys are doing a course in April to train practitioners and healthcare practitioners in terms of breaching mould and diagnosing it and treating it. Do you want to tell us a little bit about that course?

Dr. Neil Nathan:

Sure. Maybe I'll start, and Jill, you can chime in. A few months ago, Jill and I realised that we had, between us a lot of very valuable information. Often in my teaching, I teach mostly to medical audiences, and I have a particular way of looking at it. I had the opportunity to listen to Jill give a bunch of lectures. I realised she has other pieces of this that I think are very important. So I thought that a more comprehensive approach would be very, very helpful for healthcare professionals so that they didn't get the idea that there was a way to do this, that there were many ways to do this. Simplistically, the more tools you have in your toolbox, the more problems that you can solve. I mean, that's really what it boils down to.

Dr. Neil Nathan:

So we decided to put on a joint workshop, which we're going to be doing April 24th and 25th. It's going to be a live Zoom meeting. It will be taped, but I'm really going to encourage people to hear it live, the people who do participate in it. We have a bigger vision than that. We were hoping to have every three months afterwards, a three or four-hour followup in which the attendees would present their cases, and Jill and I would separately go over those cases so you will get two different perspectives on how to look at it, how to work it up, how to treat it, how to manage it. That will be ongoing. In a sense, I know both Jill and I do mentoring programs already, I can't handle all the requests for mentorship I've got. So this would be a way for us to get a larger audience, particularly in Europe.

Dr. Neil Nathan:

Both of us do a lot of consultation, and we have realised, and I know, Kiki, you know this is the case, that in Europe, there is not a lot of appreciation of either mould or Lyme. It's critical that we begin to educate practitioners about how big this is, and how important it is so that the entire European population can begin to get better treatment. So, that was the motivation. This is going to be a two-day program. We're both going to be lecturing different aspects of it. It's a practical, very comprehensive overview of mould. Meaning not only what it is, but how to diagnose it, how to treat it, and how to treat mast cell activation, limbic dysfunction, vagus nerve dysfunction, detoxification in general.

Dr. Neil Nathan:

So, we hope that at the end of this two-day period, practitioners will be much more comfortable with, okay, that's what I knew to make the diagnosis, this is how I can start treatment. Then we hope to continue their education on an ongoing basis so that we can make the European providers more comfortable. That was long-winded. Jill, why don't you add to that?

Dr. Jill Crista:

I actually don't have more to add. That was perfect. Thank you.

Dr. Neil Nathan:

Okay.

Kirkland Newman:

That was great. We'll put all the details in the show notes so it'll be accessible to people and then our social media, et cetera, because I think it's really important. In terms of the ratio, the numbers, because you guys are known as the mould lady and the mould guy, the amount of people coming to you for mould? Are you able to ascertain what proportion you would think of normal patients might have mould issues? Might be hard given your specialty.

Dr. Jill Crista:

That is difficult because I went from primary care practice to Lyme, so already that changed my perspective on the world. You can go through a phase where you have Lyme goggles on, and then I went through a phase where I had mould goggles on. I hope that my goggles are starting to settle out now. But I would guess that in my complex chronic disease patients, I think they're riding somewhere between 35 to 50% is somewhere related to mould toxin illness, mould exposure.

Dr. Neil Nathan:

I'll answer that question from several perspectives. When I was a family physician, which I was for a very long time, I didn't make those diagnoses because I'd never heard of them when I was starting my medical practice. As I became more involved, I became interested in and therefore was referred patients with chronic fatigue and fibromyalgia. That became a huge part of my practice. I was able to help those patients in much more simplistic ways by recognising that they had issues with the adrenal, thyroid, sex hormones, magnesium deficiency.

Dr. Neil Nathan:

Over the years, I begun to notice that those treatments helped a lot of my patients, but not all. I began to realise, oh my goodness, Lyme disease is out there, and I've got to learn more about that. So I learned more about that, like Jill, and I became a Lyme expert. So I was a Lyme expert with an interest in chronic fatigue and fibromyalgia, and then I learned about mould. So at this point, my patients, all have mould and Lyme. So, not a fair question. When I reflect back, I'm going to look back about 15 years ago before I was treating mould, in retrospect, there were more of those in my practice than I realised.

Dr. Neil Nathan:

Looking back on it, I know I missed that diagnosis in a number of patients. So what I can tell any practitioner is that, you are seeing mould right now, whether you know it or not. So, you do want to learn the symptoms and presentation, and you want to begin to ask a question that I never did before, "Are you living in a mouldy home? Have you seen mould? Do you smell it? If you're not living in a mouldy home now, did you before? Did you live in a basement?"

Dr. Neil Nathan:

It's really interesting, patients will immediately say, "No, no, no. I've never lived in a mouldy environment." But once that question bounces around in their head a little bit, when they come back for the second visit, they will give me a little list of, "Well, when I was a child, I lived in a mouldy basement. Then we moved to this house where I know that there was black mould on the wall of this particular building." It's almost universal. So, it's conscious.

Kirkland Newman:

Absolutely, which is super important. Then finally, before we wrap up, I just wanted to know a little bit about how you treat it. What are some of the key things, the key steps? Because I think one of the challenges is that, first of all, you can have been exposed to mould in the past, and then you can still carry it with you to the next place, even though there's no mould in the next place. So how do you deal with that? How do you get rid of it? Then the second question is, even if you get rid of the mould, you can still have cell danger response, you can still have an inflammatory reaction that persists post mould once you've gotten rid of it. So how do you deal with that?

Dr. Jill Crista:

Well, there's a two-day lecture coming up. Well, the easiest number one thing to say and the hardest to do for a lot of patients is avoidance. We've seen occupational studies when you take people out of that mouldy exposure, and granted they're not moving their stuff with them, or that kind of a thing, half the people walk away completely fine. So I think that's the hopeful message is that not everybody has to have this long story that you might get on mould Facebook groups and hear every horrible story. So, to be on that side of the coin flip, but there are a lot of things that determine that. All of those things are what we use then from there on, which is optimising their nutrition, helping with detoxification, reducing the immune activation, modulating the immune system.

Dr. Jill Crista:

For me, I've put a lot of focus on the fact that these are lipophilic. Everybody has their own selection bias based on who's coming to see them, but the majority of my patients are coming with a mycotoxin load. But they may also have allergies, they may also have issues with other parts of that mould story. But the majority of them are coming in with quite the load of mycotoxins and also endotoxin. So I love what Neil was saying, it's these water damaged buildings, I wish we could call it water damaged building illness because there's a bacterial load, there are biting insects that like to feed off mould then affect the person and transmit infectious disease. There's all of these things in a water damaged building that is a bigger story than mould, but the mycotoxins are at the most, I want to say the intention being the most dangerous.

Dr. Jill Crista:

So for me, then remembering that these are fat soluble, or lipophilic is the medical term, that means these are able to bioaccumulate. They're getting into tissues that we don't want them in, like bone marrow, like brain tissue, nervous system, the linings of our organs, the omentum that's guarding our visceral tissues. I was trained the solution to pollution is dilution. That was drilled into my head, solution to pollution is dilution. If it's a fat soluble toxin, we need to dilute that with a lot of good quality fats and

a lot of them. We see this in the autism spectrum diagnoses that a lot of these kids need fats on their nutrients and good fats. You almost need to flood them with fats. So not only flooding them, but then helping that fat movement by helping bio movement and detoxification.

Dr. Jill Crista:

If we look at animal studies, what they're doing is rather than feeding animals non-mouldy food or feed, which would be one solution, I don't know, we're weird as humans, what they're doing is they're adding bioflavonoids. They're adding herbs, like turmeric to their feed. So, if they're doing that to keep the animals alive, I think that we can safely do translational medicine and tell people that there are these specific nutrients in minerals and plants that can help the body detoxify and protect the cells.

Dr. Jill Crista:

We see cytotoxicity, or cytoprotection, geno-protection, and things that will stop osteogenetic processes, which is really a beautiful thing to be able to do for somebody because there's a lot of fear in this world of mould too. The story is, you'll never get better, this is really hard, all of those things. So I'm hoping that we can take, through our teaching that we're equipping doctors, with the faith that there are things that you can do.

Dr. Jill Crista:

The last thing on my list, and I used to have it as the top of my list until I made people worse with it, which is antifungal therapy. I've noticed that people just need their microbiome to be reset and to get back into a commensal happily living, sharing environment, where they're sharing nutrients and stuff, competing for nutrients. That's my big overview.

Kirkland Newman:

That's great. I have to say in your book, there's a lot of information about the specific nutrients, and that's really helpful. I'm sure in your two-day course, there's going to be some amazing stuff. Then Neil.

Dr. Neil Nathan:

Well, to answer your question, I'm going to do it a little differently, which is, I break down mould treatment into three major categories. Number one, you have to assess the patient's environment at home and at work to be sure they're not in a mouldy environment. If they are in a mouldy environment, they cannot get well until they fix the environment or move. That's non-negotiable. As Jill alluded to, very tricky, very difficult, there are all kinds of social reasons that moving is fraught with all these difficulties. People don't have the financial resources to do it. They're already living with their parents, and so on and so forth. But, bottom line is you can not get well, if you're staying in a mouldy environment. You've got to get out of that environment or fix it, which is doable most of the time.

Dr. Neil Nathan:

Number two, you need to take the binders, the specific binders, things like charcoal, clay, chlorella, *Saccharomyces boulardii*, and others that specifically bind those toxins to pull them out of the body. Thirdly, for many people, not all, you need to add an antifungal piece because if that patient is growing mould and candida in their sinus or gut areas, which is typically where it grows, they can't really get well until we get it out of there. By that point, the body can reboot itself. One of the beautiful things about the human body is its capable of healing, if we give it what it needs to heal properly.

Dr. Neil Nathan:

You had alluded, Kiki, to the cell danger response. Yes, if there is a prolonged inflammatory process, the key to shutting off the cell danger response is not convincing, but showing the body that what's triggering it is gone. So if the toxin is gone, then the mitochondria, which are the part of the body that monitor the whole cell danger response process, can go, "it's safe, now we can move on through the cell danger healing process".

Dr. Neil Nathan:

Then fixing hormones, getting detoxification to work, taking the correct nutrients, at that point, that kicks in and healing as possible. So if I have one message, well, 10 messages, it's, mould toxicity is common, needs to be looked at, diagnosed. But here's the big thing, it can be successfully treated. So, as awful as people can feel, we can treat it. That's really the take home message

Kirkland Newman:

They get better. I think two things that I just wanted to pick up on. One is the fact that even if you move from your water damaged building, when I was reading Jill's book, I was really upset to see that your stuffed animals, and your clothes, and your books, these can contain the mycotoxins, the mould spores, the dust, et cetera. If you bring that to your new environment, it can continue to impact you. How big a problem is that? I mean, do you have to burn all your belongings, this is quite traumatic.

Dr. Jill Crista:

Well, I'm pretty clear that I'm a body expert, not so much a building expert. But as doctors, we do have to help our patients navigate these difficult decisions. I do recommend that people, and I know that in the UK it's hard to find someone that specialises in their building and their environment, their built space, so that they can do some testing and figure out exactly what's going on. Just like Neil said, you need to investigate what's going on with their current living environment.

Dr. Jill Crista:

The question about stuff comes up all of the time. I highly recommend people go to Mould Finders Radio. It's a podcast that goes through all of these things, all of these questions. What about stuff? He has an algorithm as far as you know, how porous is it to how much does it mean to you? Like if it's a really porous thing and you have a lot of attachment to it, maybe it needs to just be stored in plastic offsite somewhere else while you clean up your environment and you clean up your body. Once we get that cell danger response and that limbic system out of that mode of "I'm not safe", and you can really distinguish what's affecting you and what's not. Re-engaging that intuition that is having a true reaction from a, "I'm going to react to everything" reaction and then interact with that thing later.

Dr. Jill Crista:

But stuff can wait, nothing's going to expire. That stuffed animal isn't going to expire. So, it can be stored away, and you can make these decisions with professionals who can test. If you want to use your own body, is that one of the things that, I think that we're both very engaged in is getting people's resilience back. You can heal and you can heal and be a better person, a stronger person, and one that trusts your

intuition that when you go into a mouldy hotel room, you can say, "This isn't going to be good for me, I'm going to request another room," and that's okay.

Dr. Jill Crista:

Those kind of self protection things that really help keep your total toxic load down. Maybe they don't use chemicals on their lawn anymore, maybe they're not using chemicals for cleaning anymore because this happened. That's going to benefit the whole planet if people are more conscious of that.

Kirkland Newman:

Agreed. One of the issues though, when you talk about people coming and testing, is that a lot of the time people will come and test and say, "Well, it's not that bad. They're very low levels here," which happened to a friend of mine. Yet if you do different types of tests, which is the plates where you grow the mould, essentially, which is much more thorough, you get a very different result. A lot of the landlords are using the more light testing because it's in their interest to say, "Actually, this isn't that bad. Frankly, it doesn't harm you." So, there's not enough mainstream awareness of the fact that mycotoxins can be so harmful.

Kirkland Newman:

As you were saying, it's more of a focus on the mould spores and mould allergies. But that's just a tiny piece of the puzzle or the picture. So, it's a challenge. Then the only other thing I wanted to touch on, and I know that you go through a number of different supplements to help detoxification and to help support mould clearance, I guess binders and things like milk thistle and resveratrol, and those types of things. I'm interested in the way you talk about the answer to pollution is dilution. The fact that these toxins are fat soluble is fascinating. Would you say that people who are on a very high fat, but good fats, like lots of olive oil, and avocados, and nuts, and seeds, is that something that we should be doing to help us with mould toxicity?

Dr. Jill Crista:

I personally have found that to be really beneficial, especially if brain fog is an issue. If there are a lot of cognitive problems or anxiety, I describe it, and it's very much over simplifying it, but the fat is coating your nerves. It's the way my brain thinks about it. But that's why things like fiber and binders are so important is that you can be putting the fat in, but you really need to be interrupting that exchange file. I tease that I'm a bile file. I'm so into making bile and getting people's bile moving and binding the bile that's been detoxified, as well as the other binders that are grabbing things that are unbound bile. So it's that combination of things. Because a lot of people have endotoxin exposure, that's where some of these things, like charcoal and they can also benefit them because it can grab some of those. I do see that the movement of bile has to be happening at the same time when you're dumping in more fats for dilution, movement and grabbing of bile.

Kirkland Newman:

Yeah, fantastic. Excellent. Well, guys, that has been really, really fascinating, and has given us just a taste of, you both have some fantastic books. Dr. Neil, your book, Toxic, is fantastic. Dr. Jill. Breaking the Mould is brilliant. So, I highly recommend those. Then your course on the 24th and 25th April, I think is going to be brilliant. So, well done for doing that. Thank you both so much for your time.

The MindHealth360 Show - Dr. Neil Nathan and Dr. Jill Crista

Dr. Neil Nathan:

I just want to thank you for giving us the opportunity to share what we know with you and your audience. I hope this will be helpful for them.

Kirkland Newman:

Excellent. Well, thank you so much both of you.

Kirkland Newman:

Thank you so much for listening to the MindHealth360 Show. I hope that we've helped you realise that mental health symptoms have root causes that can, and need to be addressed in order to sustainably heal. I've given you some ideas about steps you, your loved ones, or clients may take to start their healing journey. Please share this interview with anyone you think may find it helpful, and don't forget to subscribe to keep up to date with our latest interviews on integrative mental health. If you want further information, please go to www.mindhealth360.com, or find us on social media. This information is for educational purposes only, and is not intended to diagnose or treat any disease, or to replace medical advice. Please always consult your healthcare practitioner before discontinuing any medication or implementing any changes in your diet, lifestyle, or supplement program.