

What You Must Know About Mold – Dr. Neil Nathan and Dr. Margaret Christensen – #829

Announcer:

Bulletproof Radio, a state of high performance.

Dave Asprey:

One of the questions that comes up most often is, Dave, tell me about toxic mold. What is it? Why do I care? So I put together some of my top resources into a single Bulletproof Radio feature package for you. If you have water damage in your home, or you have weird stuff going on you can't explain, listen to this and share it with someone else who has mold problems. You'll learn from Dr. Neil Nathan, who's been a researcher and a medical, will come detective, and healer of mold toxicity for about 25 years. He believes that there's about 10 million people in the US who have some degree of mold toxicity. Other experts I've interviewed believe it's a lot more. Actually I do as well. He treats especially toxic and sensitive patients. There are probably 10 million of those.

I also added Dr. Margaret Christensen because she and her family went through severe mold exposure. She now works to treat molds toxic effects on hormones, brains, and kids using functional and integrative medicine. She also made the Toxic Mold Summit, which brings together other experts to address mold in the body, the brain, the environment, maybe even in your coffee. Make sure you go to daveasprey.com and go to the page for this episode. It's got all the resources if you're paying attention to mold. There's a link to Moldy movie, and again, that is a gift for you. There's a bunch of blog articles about mold, and there's a link to my company called Homebiotic, where you'll find products that are made out of natural soil bacteria, probiotics for your home that function in soil to keep mold at bay. Enjoy the show.

You might know if you're a long-time listener, but you might not know, I had serious problems with toxic mold as a kid growing up. And I had asthma and behavioral issues and ODD and ADHD and all sorts of stuff like that. One of the major causes, actually two of those major causes, are things that were in the environment around me. You know the definition of biohacking, the art and science are changing the environment around you and inside of you. So they have full control of your own biology. Well, there are some things that really mess with a huge number of people in the environment. One of them is toxic mold. Here's the deal. If you are alive, you are constantly exposed to toxic mold. If your kids are in a public school, they're getting toxic mold. If you go into many buildings, you're getting exposed and the symptoms that happen are all over the place.

I want you to know about this because it's a major variable. And if it's not you, it can be someone in your family and you have different responses. Being able to understand why and how, and for me to piece together those pieces, I did biohack myself and I am so incredibly resilient and impactful, but there are more things that even I can do. And there's probably things you can do to not let this stuff happen to you and to not let it happen to your family as well. Dr. Christensen or Margaret, welcome to the show.

Dr. Margaret Christensen:

Thank you so much for having me, Dave. This is absolutely near and dear to my heart. And oh my gosh, really the past 18 years have been a labor of love on my part to really understand what's happened to my family. And then really to all the clients that I see understanding that toxic mold is probably one of the most common unrecognized underlying factors for many different chronic illnesses. Like you said, the whole spectrum.

Dave Asprey:

Dr. Nathan, welcome to the show.

Dr. Neil Nathan:

Thanks for having me on.

Dave Asprey:

Now, let's go straight to, for people who don't know about toxic mold or these other chronic illnesses you're talking about, walk me through the typical way people present when something in their environment is messing with them?

Dr. Neil Nathan:

Sure. And I want to echo something you started saying, it's currently thought that there are 10 million people in this country who have some degree of mold toxicity. So we're not talking about a rare condition that no one would have any connection to whatsoever. It's common. And it comes from moldy buildings, which are ubiquitous in this country. All you need is a little bit of water damage, and we're often running. Some of the things that scare us the most is that some of these water damaged buildings are schools. Schools typically have very little budget. Roof leaks, can't quite fix it in a timely fashion and your kids are being exposed to this stuff. Office buildings. So it's common and I want to echo that. Mold symptoms are all over the place, as you indicated, because mold toxicity affects inflammation in the body.

Every area of the body can be inflamed by mold toxicity. And it can take different forms in different patients based on their genetics and based on their biochemistry. So we could see commonly, we would see fatigue, fatigue to the point of this odd thing we call post exertional malaise, where you do something and you get wasted afterwards for a couple of days.

Dave Asprey:

I used to have that. Yeah.

Dr. Neil Nathan:

Well, it has a medical name. There's also post exertional myalgia in which you do something and your muscles are sore way longer than they ever ought to be. We have cognitive difficulties, difficulty with brain fog, memory, focus, concentration. Dale Bredesen, who's done a lot of breakthrough work in Alzheimer's disease, has found that a large percentage of his patients who can get well from what is misdiagnosed as Alzheimer's, they've got mold toxicity.

Dr. Margaret Christensen:

Well, Dave, this comes back to, again, the brain and the limbic system. Again, what part of the brain becomes on fire because of this? So if you have sinuses that are full of mold, and you've got all this inflammation, that's impacting your frontal lobes. That's the area right behind your forehead. And organ, the limbic system and you're creating anxiety. One of the very common symptoms is anxiety that doesn't really have a source. So you're anxious all the time. You can't sleep, sleep disruptions and insomnia is another huge symptom of this. It makes sense, but now there's so much data looking at things like, again, psychosis and bipolar and even against schizophrenia.

I'm very familiar with all of those things. Then you look at little children and you're talking autism spectrum disorders. You're getting all this chronic brain inflammation going on that can just show up in a lot of different ways. It can be behavioral issues, psychiatric issues, neurodegenerative diseases, including Parkinson's, Alzheimer's, autism. All of those things are important. Mary Ackerley is a psychiatrist who speaks to this and the whole mold rage issue on the Toxic Mold Summit. Again, how common this is, this mold rage?

Dave Asprey:

The mold rage thing. I've done all kinds of neurofeedback. I'm generally a pretty chill guy. I'm at peace most of the time and all. I started yelling at the kids for riding too far ahead. I don't even know what it was for. I'm like, why am I so angry right now for no apparent reason? My kids are like, "What are you doing, daddy?" I'm like, "I don't really know." Some people would say, "Dave, you're a delicate flower, snowflake." How common is this stuff? Am I the 1%?, am I the 20%?

Dr. Margaret Christensen:

Oh my gosh. No, it's a large percentage. I'm not going to put a number on there, but I can just also just speak from personal experience. Again, my former husband was just irritable and angry and yelling. That was not his modus operandi at all.

Dr. Neil Nathan:

Mold toxicity is something we can diagnose and we can treat. So if you have yourself a loved one, a friend, a neighbor, and they're suffering with a host of conditions and their doctors are scratching their heads and they don't know what they can do about it, the implication being it's in your head, but it's not. Tell them about mold toxicity because it is common and it's curable. I hope that your listeners can really take in that this is something that we need to be aware of because it's really common.

Dave Asprey:

One thing you didn't mention, Neil, that I think bears note is a feeling you've probably heard from your patients. It's very hard to make decisions. Everything feels like so much work like you're walking through mud. And when you're sick and you need to make a decision to get well and to do something, your follow-through is just taken out and you get pissed off all the time. So the emotional control is a very difficult thing.

Dr. Neil Nathan:

The basic biology of all mold dysfunction, which is mold toxin, enters the cells and begins to interfere with certain types of metabolism. That type of interference affects all parts of the body. It affects the brain and brain chemistry and brain effects. Some of those effects affect the pituitary system, which is a part of the brain. That means most hormones are affected. And the same way that a woman might have a mood swing when her estrogen level is low, that kind of thing could happen to us as well. So that the adrenal, thyroid, sex hormones and other hormones of the body get disrupted in a fluctuating pattern, which is very difficult for people to understand. The mold toxic level doesn't stay stable in the body. It fluctuates, moves up and down. So you could be better some days and worse others. Just to echo what you said, you don't have to have all of these symptoms. A few of them will suffice and a few of them can actually make you quite miserable. So again, it's just something to look for.

Dave Asprey:

Literally three days ago, a good friend of mine, someone I really care about who's a fitness influencer online. He finally got a mycotoxin blood panel, and surprisingly, it came back with okra toxin, which is the stuff that I take out of my Bulletproof coffee beans, and Zearalenone. Talk to me about hormones and that specific mycotoxin. Tell me about the interaction there.

Dr. Margaret Christensen:

Well, hormones are a huge issue in terms of what mycotoxins can do to disrupt it. And it happens really in four different ways. Well, hormones are a huge issue in terms of what mycotoxins can do to disrupt it. And it happens really in four different ways. One would be a hormone mimetic. Again, it is mimicking estrogen. For example, Zearalenone, the one you spoke of actually mimics estrogen. This has been well known in the animal husbandry industries for many, many, many, many years. So we can have mycotoxins that actually look like, and/or attached to thyroid receptors, testosterone receptors, estrogen receptors, et cetera. So that's one way this hormone, this hormone mimetic way. Another way that you can see hormonal disruption is directly through the limbic system, the olfactory nerve, which is the nervous and your nose ends up going to directly back into the brain, into the Bard of the brain, that's called the limbic system, which is made up of three major parts.

One of which is the hypothalamus. People may have heard about that. That's a master regulatory center of the brain. That's where all the hormones are regulated. If you have inflammation in your olfactory nerve, because you're breathing in these terrible toxins, they're filling up your sinuses, you're all inflamed, that inflammation is actually traveling back along that olfactory nerve. And mycotoxins, by the way, do dissolve cell membranes, they create a great deal of inflammation and disrupt the immune system. So you can get inflammation in the hypothalamus. Again, that could disrupt everything from your menstrual cycles to endometriosis, to again, testosterone in men. We see in fertility, we see hot flashes, we see early menopause, super heavy periods because of dysregulation in the hypothalamus. That's number two.

The third way that we see a lot of hormonal disruption in mold illness is because people get sick. So you're getting sick frequently and often then getting put on antibiotics. Antibiotics disrupt the microbiome in the gut and really disrupt hormonal metabolism. We know that much of hormone metabolism is actually happening in the gastrointestinal tract by good bacteria. So if you've killed all those off or you disrupted them, you've got a lot of yeast or dysbiosis happening, unhealthy bacteria, then again, that's going to impact your hormonal metabolism. And really probably the fourth big way that I think about it is also disrupting the hypothalamic pituitary adrenal axis. So again, this whole adrenal issue. The body becomes so stressed, you're pouring out cortisol, you're pouring out adrenaline, and then that can disrupt. Actually back to the original and the hypothalamus, there's something called leptin that's produced in the brain. Leptin receptors become disrupted. When I see women who say, "Hey, I've gained 20 or 30 pounds in six months, I haven't done anything different. What's wrong?" The first thing I ask is, has there been a toxic mold exposure?

Dave Asprey:

Yeah. Do you have just a small, like a mop anywhere in your house? That's a good one. Has there been water inside your house where it doesn't go? And the answer is shockingly so often that that's the case. The idea of it breaking the hypothalamus and the HPA. Well, the hypothalamus controls the pituitary, controls the adrenals. So everything gets wrecked when you do that and it can take a while in order for people to heal, but it seems like it's possible for almost everyone if not everyone. Do you find people who are just so poisoned by mold, there's no hope?

Dr. Margaret Christensen:

Oh, there's always hope. There's always hope. Yeah, there's always hope. Again, it's a multifactorial challenge. So the way I approach it is I'm not just dealing at the physiologic level, the physical level, of course, you're using binders to pull things out and up-regulating detox mechanisms with things like glutathione. But I do a whole lot of work in the limbic system because oftentimes people who've had toxic mold exposure, it's not one exposure. It's multiple and accumulative over time. And with a lot of antibiotics, a lot of other stressors, et cetera. Particularly if you've had ACEs or adverse childhood events or major traumas in your life, your limbic system, that's your fight or flight mechanism in the body. So the Olympic system I mentioned is composed of three major parts, the hypothalamus, master regulatory center of the brain, the amygdala, that's your fight or flight center, and then the hippocampus, which is the memory center.

Dr. Neil Nathan:

If the limbic system is dysfunctional, it will actually prevent the body from allowing you to take what you need to get well. Because I'm going to tie it in now to the vagus nerve system. The vagus nerve is a different part of the nervous system than the limbic system, but they intimately talk to each other a lot. And what they control is your perception of safety. So if you don't feel safe in your body, and for example, if you don't know what person you're going to pass, who's wearing a scent, that's going to make you really sick for no reason. If you don't know what light you're going to be exposed to or sound, or if you don't know what building you can walk into, without it making you sick within minutes of walking into the building, but you described. If you've got that going, the nervous system, this is not psychological, the nervous system tries to protect you by becoming more vigilant.

It looks around into your environment and it goes, huh, I wonder if that's safe, maybe it's not safe. In fact, I'm not sure that's safe. So I'm not going to let you take it. So our sensitive patients find that when they try to take the materials that would otherwise get them well, even my new doses don't work. So one of the biggest stumbling blocks in treating people who have mold toxicity is that it's not often recognized that we've got to quiet down the limbic system and vagus nerve first before we even address other forms of treatment. The body's not trying to hurt you. It's trying to protect you. And many, not all, but many of our patients who get mold toxicity become exquisitely sensitive to the presence of mold and scents. But that's protective on one hand, but limiting in others.

Dave Asprey:

That's a pain in the ass.

Dr. Neil Nathan:

Yeah. But it's real. Again, human beings have a tendency to view the entire world through their own eyes, which is, I'm not reacting to that. Why are you? There must be something wrong with you, because I'm okay with this. It doesn't take into account that we're all different. We're all biochemically and genetically different. And if you are suffering with mold toxicity, your sensitivity, as you have experienced, goes through the roof.

Dr. Margaret Christensen:

One of the things that happens when you get mold toxicity, it suppresses what's called your innate immune system. That's the part of the immune system that actually goes after viruses and bacteria and things like line. Again, this is what we're seeing in all these psychiatric patients. [inaudible 00:18:26]

talked about it. He said, if you went into, at any psych ward and started to doing mycotoxin testing on folks, you'd get 80%, 90% positive. That's why [crosstalk 00:18:34].

Dave Asprey:

Yeah, I would guess 90?

Dr. Margaret Christensen:

Yeah, 90.

Dave Asprey:

And in presence, in presence themselves are terribly moldy, which drives violent behavior. But the people who go to prison, 85% of them have brain dysfunction and a huge percentage of that is caused by mold in the environment. It's like we got to have clean schools and clean in places of employment and things [inaudible 00:18:52].

Dr. Margaret Christensen:

And these landlords too need to be responsible. If you're a slum landlord, you've got these crappy housing and you are a lower income person and you don't have the ability to build something or live in a nicer space. Again, we see so much housing that is just terrible. We're not talking about the fact that air quality impacts the immune system in the lungs. So if you're living in a polluted city or you've been breathing in a bunch of crap, or you're living in a moldy apartment or house or work place, and you're breathing that in, and you're suppressing the innate immune system in your lung and you're activating the adaptive, that's the thing that produces all those cytokines that everybody's learned about. Everybody's learned that word cytokine, so your adaptive immune system starts pouring out cytokines and antibodies. Those are the folks that are really susceptible to getting super sick from mold.

Dr. Neil Nathan:

And if someone gets a viral infection and they have mold toxicity, it makes them much, much worse. Because the way the immune system deals with an infection and I'll add, or allergies. Seasonal allergies will do the same thing, adds another whole layer of what we call cytokine, inflammatory cytokine, inflammation to an already inflamed system. So our patients get worse and it lasts longer. People who don't have a propensity and have not had mold toxicity can be exposed and not react much at all. Maybe a little bit, maybe their eyes will sting or burn, or they'll have a little bit of throat soreness.

For people who have had mold toxicity and then recover, to some extent they will always be more vulnerable. It's almost like the body goes back into a memory of, oh yeah, I remember when I reacted to that, not as bad. The better you can care for it, the better you can be. So in your case, it's a good example. You've had severe mold toxicity, but you've learned that if I'm re-exposed, I can just take my binders. I can just take materials that will quiet this reaction, and I can turn it off fairly quickly.

Dave Asprey:

I have a theory there that this comes from mitochondria. Your mitochondria ancient bacteria, and what enemy did anxious bacteria have? Oh, it was mold. So mold makes antibiotics kills bacteria. They're both fighting over the same piece of cheese or the same dead dinosaur. The fights been going on for a billion years or something, two billion probably. And from that perspective, I believe that the mitochondrial have their own bacteria level. Algorithmic intelligence has a distributed system and it feels like it just

gets whacked. The reason I say that is because physical weakness happens, like my grip strength drops through the floor. And when I say it, this is a dynamometer, this is my grip strength meter. I'm stronger in my growth strength than an 18 year old when I'm normal. And when I get exposed to mold, my grow string drops through the floor and I just can't squeeze. Some of that's neurological, but some of it is that lack of breathing. I think it's a metabolic thing. Am I nuts for that theory? Is there any validity to it?

Dr. Neil Nathan:

No, but alas, you're not the first to come up with it.

Dave Asprey:

I'm not, who did that?

Dr. Neil Nathan:

Bob Naviaux.

Dave Asprey:

Oh really? Okay. I haven't seen Bob's work.

Dr. Neil Nathan:

Are you aware of the cell danger response?

Dave Asprey:

I am not aware of the cell danger response.

Dr. Neil Nathan:

Oh goodness. You're in for a treat. Bob Naviaux is an MD, is a professor of genetics and pediatrics at UC San Diego. He has a fabulous lab there that he's doing some of the best work in the world on this particular subject. He's been studying this for a long time. In 2013, he published a landmark paper, simply called The Cell Danger Response in the journal Mitochondrion, if you simply Google Naviaux, cell danger response, you'll get a host of papers that Bob has written all published and peer reviewed journals. What he realized and put together is when a cell is exposed to either an infectious agent or a toxin, it goes through a biochemical dance, which is age old, millennial old that was protective in nature to protect the cell. It is the mitochondria in the cell that's got the ball rolling.

Mitochondria are exquisitely sensitive to electrical changes inside the cell. And when exposed to a toxin or an infectious agent, there is a drop in voltage in the cell, [inaudible 00:23:40] voltage, the mitochondria react. And they set the cell danger response in motion, which includes shutting down the cell so that the infecting organism can't do anything with it. It's an intentional shutting down that things that seem different. For example, all patients with mold toxicity have mitochondrial dysfunction. They have to because it comes from them. All patients with mold toxicity don't methalate very well because intentionally, the mitochondria signal the cells to stop methylating. For example, a virus can't replicate unless it hijacks your methylation chemistry. So what do we do? We shut it down so that the virus can't do that. It's a series of biochemical events Dr. Naviaux has laid out, and subsequently, he's published even a larger model of what really amounts to most chronic illness is triggered by this cell danger response.

So if we're talking about healing that, we need to understand the cell danger response to understand where you are in the cell danger response cycle. Another important realization here is, many physicians have realized that if you have this issue, your mitochondria aren't functioning. So what do they do? They give you supplements that help mitochondria function better. Things like CoQ10, L-taurine, L-carnitine, D-ribose, whatever your favorites are. Here's the problem. When the cell is shut down in the first phase of the cell danger response, it's on survival mode, it can't use it. It can't do anything with it.

In fact, it may hurt the cell. It's got to figure out what to do with it, because it's just trying to save its own life, and that translates to the whole level of the organism. So you can't give supplements that the body needs at that point until you get rid of the toxin or the infection or both, or you're not going anywhere. That's a landmark finding because so many physicians don't understand that and they start giving things that should help you early on without realizing that body's not ready for it.

Dave Asprey:

Let's talk a little bit more about hormones. Give me the woman hormones symptoms. We touched on, but I want, there's just the list for listeners.

Dr. Margaret Christensen:

Okay. Sure, sure. Okay. We can start with infertility and super heavy periods, endometriosis, uterine fibroids, bad PMS, breast tenderness, early menopause, night sweats, hot flashes. Those are all pretty common. And then waking, waking it's a huge one. I think those are the... Yeah.

Dave Asprey:

It's the big list for women. So if those are going on, you might want to check your air in your home. And what about for men? What's the difference? What do we get?

Dr. Margaret Christensen:

So again, with men, [inaudible 00:27:01] like to see things like hypertension, cardiovascular issues, blood pressure, they can have both weight gain and weight loss. It just depends on the genetics there. We'll see again, a lot of headaches, brain fog, just fatigue issues and erectile dysfunction. Those are pretty common with men. Again, disrupting testosterone.

Dave Asprey:

Night sweats are another thing I used to have, they were so bad. I don't get night sweats anymore. It's exceptionally rare for me to be exposed to mold in my food or in my environment because I know how to control it. I sense it. And I'm like, I'm not going there. But every now and then it happens. I'm like, I remember. This was my, my life as a boy and as a teenager, just terrible drenching night sweats. That's all gone and I can bring it back. You didn't mention Russell's leg syndrome either for men and women.

Dr. Margaret Christensen:

Oh yes. Yeah, absolutely. That would fall in the neurodegenerative disease category. And absolutely, Russell's legs can be a big one.

Dave Asprey:

Mine get turned on if I eat food that has mold in it, my legs start to twitch. I'm like, oh yeah, I remember that. But it's gone the next day if I take binders and it's fascinating.

Dr. Margaret Christensen:

Well, I also mentioned cancer. Mold and fungus and yeast and candida play a huge role here. I don't know if you've ever heard Doug Kaufman. Again, he's got this fabulous talk called What if Cancer is Fungus? But with mycotoxins, there's for example, a mycotoxin that's called mycophenolic acid or MPA. That is actually used in people who are getting bone marrow transplants to kill their immune system before they're getting a transplant from somebody else. You have suppression of the innate immune system, which is going after viruses, bacteria, and abnormal cells like cancer cells. So if this part of the immune system is not working, you may be missing, again, those bad guys cells that are out there. And then this part of the immune system, the adaptive is what's so firing all these cytokines off and the antibodies off.

Again, a lot of it has to do with genetics. I think that those are really important pieces. So if you're looking at breast cancer, uterine cancer, again, all these hormonal cancers, I want to know. I've had several women with breast cancer and it turns out they were in very moldy, incredibly moldy environments. So I think, again, if you have cancer of any immune system suppression, you absolutely have to be in a house that has very clean air quality as part of your recovery.

Dave Asprey:

All right. Now, you've talked hormones in men and women and what it's doing. You've talked about the neurological aspects of it in terms of all these neurodegenerative diseases. I feel like we've covered most of the psychology side of it, or maybe psychiatry side of it as well. So there's neurodegeneration and then there's the behavioral side, like schizophrenia and ADD and ADHD. What else would be on that list of neurological stuff to check out?

Dr. Margaret Christensen:

Again, any tremors weakness.

Dave Asprey:

Okay.

Dr. Margaret Christensen:

Yeah, yeah. Tremors weakness, unusual pain syndromes as well.

Dave Asprey:

Oh, chronic pain. Yeah. It's a major trigger. You get rid of the mold, the chronic pain goes away. Every pain doctor listening, and there's a lot of pain doctors listen to the show. Yeah, you guys need to treat mold and use a little bit of light therapy and the normal stuff you use topically, and it will go away. It's a part of the thing.

Dr. Margaret Christensen:

This also comes back to one of the areas that we did not touch on, is our chronic infections like Lyme, co-infections, chronic bacterial infections, excuse me, and viral infections. So when you're suppressing the innate immune system that is supposed to keep, if you've gotten bitten by ticks someplace

sometime in your lifetime, the immune system usually keeps that in check. But if your innate immune system is suppressed, then you are much, much more likely for that Lyme to start expressing itself. Or its co-infections like Bartonella, Babesia, ehrlichiosis. And if you talk about weird neurological symptoms and pain, again, oftentimes you'll see that mold Lyme combo. And for all the people out there who have Lyme that had been treating for Lyme for years and years with antibiotics and stuff, where is the mold? Look for the mold first.

Dave Asprey:

It's not found.

Dr. Margaret Christensen:

Yes. Thank you. Yes. Look for the mold first. I'm part of an organization that I would encourage even all the lay people to join, it's called iseai.org, International Society for Environmentally Acquired Illness. It is all of us practitioners who are working in the realms of chronic environmental toxicants, including mold and Lyme and its co-infections and looking at how do these things interact with one another? It's huge. Unfortunately, many people would Lyme have been treated for years and years and years with antibiotics and not getting better. What does the antibiotics do? Well, they're destroying your microbiome and they're destroying and impacting your mitochondria. And they've been living in a moldy house the whole time.

Dave Asprey:

Yeah.

Dr. Neil Nathan:

I got an email today from a physician friend of mine who has been struggling with mold and Lyme and she keeps telling me how sick she gets every time she goes into her home. I went, "Duh, get out of your home." I've told her that several times and I got an email today going, "Thank you for pushing me." Said, "My brain wasn't working well enough to take in that I actually had to get out of my home." Which is affecting her child as well. And she gave me just a nice thank you note. "Thank you for pushing me." I just didn't have the judgment to act at the level that I needed to because that's how mold affects people, but we can go on from there. So you've got to evaluate your environment and your environment's got to be safe.

Second, you've got to use the binders that are correct for the toxins that are in your body. And third, if you've [inaudible 00:33:18], you've got to take antifungals for the sinus and gut areas to get it out of there. And here's the good news. It's treatable. You can cure it, you can fix it. But you can't just ignore it. It will not go away.

Dave Asprey:

You mentioned some stuff earlier about air quality. So let's say someone's like, yeah, I had a leak behind the sink. I never really fixed it. There's a little bit of black fuzz poking out. How do you go about making the air safer than it is even if it's not perfect, especially if you're at home all the time cooking?

Dr. Margaret Christensen:

Well, the one thing you don't do is go after it with bleach because that's not a good idea. Ideally, you get professionals in there to take care of it because you can make yourself super, super sick trying to do it

yourself if you don't know what you're doing. Again, I have a lot of resources on the Mold Summit that if you were going to attempt any little DIY that can help you out, but please don't just get on there with a bottle of Clorox and start waging step. I just saw, I just saw Clorox commercial after a flood and all of these walls were being sprayed down with Clorox and I was just appalled. [inaudible 00:34:30], there's-

Dave Asprey:

It works great on non-porous surfaces. So if it's on your shower, if it's on tile or metal or something, you can do it. But if it's drywall, unfortunately if there's water in it, it's going to soak in. And once it soaks in, I promise you that when you kill most of mold, what comes back is pissed.

Dr. Margaret Christensen:

Yeah, [inaudible 00:34:51].

Dave Asprey:

It grows really, really well.

Dr. Margaret Christensen:

Hydrogen Peroxide is a better option. And then there are also some citrus-based antifungals that are better. And then again, professionals, there's a lot of chemical fungicides. So you don't want to use those. You want to use, it's a very concentrated hydroperoxide is one of the ways that professionals utilize to clean things up. Anyway, I would recommend that you have very high quality air filtration in your central HVAC system. Again, that is also one of the places that it hides, that mold often hides, is in the particularly in the supply plan you have central heat in there. So you can use also ultraviolet lights shining on directly on the air filters that can be also help decrease the load.

But for a lot of people, I just have them have in their house, make sure that they have high quality air filtration units in the bedrooms. So that making sure that when everybody's sleeping, that you've got the best air quality possible. And we didn't even touch on EMS, but that's a whole nother piece electromagnetic fields that are coming off, all of your electronic stuff and the new frequency in particular, that's a really big deal because it really impacts cell membranes. That is another simple thing that you can also do to improve air quality, is making sure that at nighttime, again, while you're sleeping, that you've turned off your wifi router, that you don't sleep with any cell phones near your head. You're trying to turn off all the electronics in your bedroom, all of those things. Those are some of the things that are simple to help clear up.

Dave Asprey:

Studying mold people, is interesting because if you've lost 90% of your cell membrane function, maybe it's not quite that much, but I feel like I was that much. And then you do something that changes things by 1%, you'll feel it. Because 1% in a normal person is 10% for a mold person who's at the bottom. And so you can say, no, that actually does work. And a lot of the reasons that I know some of the things work where studies come out five years after I share it, I'm like, yeah, I know. Because you can observe it when you're down that low. Once you maintain that level of awareness, even when your system works pretty well like mine does, I can still feel the subtle variations in bioenergetics. And I don't mean quantum blue bioenergetics, I mean mitochondrial function. Oh, today, my mitochondria are at 100% today. They're not. It's just a whole menu of things that you can sense when you felt the shift from that. So yeah, I do all of those EMF safety things and I-

Dr. Margaret Christensen:

That's good. Sinus rinse, sinus rents. Yes. Sinus rinsing, that's a huge piece that's very simple to do. I don't know why they're not recommending that for COVID prevention at the same time. Again, this just comes back to the whole idea that chronic sinus infections are really, they're fungal. If you are being given antibiotics over and over and over again, that's just crazy. It's a fungal problem. Dr. Donald Dennis is an amazing ENT that I interview on the summit and we have beautiful pictures of surgeries that he's done, but he's using some things called Amphotericin, which is an antifungal special rinsing and a special device to get into all the sinuses and rinsing people. Overnight, you have practically cures of some neurodegenerative diseases, some psychiatric issues, et cetera, for people who have got chronic sinus infections.

Dave Asprey:

Wow. Where's he based?

Dr. Margaret Christensen:

He's in Atlanta.

Dave Asprey:

The fact that there's hope like this, it was not like that in 2005, or even 2010, where we could be programmatic, you couldn't get a good urinary mycotoxin thing. The US military add some things. And we had a broad spectrum, take everything that can buy into everything. That was certainly something that I started with. What happens if you take broad spectrum binders for long periods of time?

Dr. Neil Nathan:

Well, if you have mold toxicity, they can help. You do want to be specific. So I'm going to answer that question in two different ways. First of all, it can help you. The problem is you don't know how long to take it for, because you can't know when the mold is out of your body. The only way I know of to do that is to get a repeat mold test that shows that you've cleared it. If you feel better and not completely well, and you stop treatment and you stop taking your binders, mold will grow back. And I've seen this way too often. So it's important not to try to do this on your own or without knowing what you're doing. It's difficult enough and tricky enough that you need to be working with someone who knows what they're doing and you can't just do it.

The other aspect of your question is, I think, how safe is it to take binders for a long time? That's a very interesting question. Many people in the naturopathic community are putting out warnings of, oh no, you can't take charcoal regularly for a long period of time or you can't take clay for a long period of time or chlorella for a long period of time. It will deplete your body of nutrients. I've been doing this for 20 years and I've given large amounts of binders to people for years on end. I have not seen that. So perhaps in a medical study, a minute amount of nutrients might be lost due to binders. I've not seen it.

The flip side of that is more important. If there's toxins in your body, and I assure every listener you've got, your body is loaded with toxins. There are 80,000 chemicals in this world, and we don't even know how to measure most of them. And we don't even know what most of them do. I too have had mold toxicity by the way. My view is, and I tell this to my patients, as far as I'm concerned, my toxin exposure is so enormous and so constant, even living clean and eating organic and doing all the right things, that I take binders on a daily basis, and I plan on doing so for the rest of my earthly life.

Dave Asprey:

Hallelujah, brother. That is one of the ways to live longer. It's in superhuman, how to live down to 180 book. If you're not doing that, or better yet, the people, oh, I'm going to get all my vitamins from mother nature. It's like, great, then get all of your toxins from mother nature too. Because we are living under a load that's bigger than it was. What binders do you take on a regular basis? What are the ones that you like?

Dr. Neil Nathan:

I personally take a bentonite clay, charcoal and chlorella every day.

Dave Asprey:

I think for people who are listening to this and have mold issues, they need to check out your Mold Summit for sure.

Dr. Margaret Christensen:

Again, for those people who follow functional medicine, I've interviewed a number of the top names in functional medicine. Most of us have gotten into functional medicine because of mold exposures. I covered every single spectrum in depth of what we just talked about. Psychiatric neurological children. We didn't cover chronic infections, parasitic things, the whole ball of wax, both again, how does it show up symptomologically, and then what do you do? What are all the different approaches from very basics to very advanced? Things like using, again, nasal peptides, et cetera, and things like IB ozone, IB vitamin C too, those all can be helpful. And then also, we also cover how do you assess a home and a building, and then what do you do and how do you mediate and how do you mediate safely? Again, also people who have severe multiple chemical sensitivity, pot syndrome, again, chronic fatigue, fibromyalgia, and even mystery illnesses. I guarantee you a huge piece of it is mold.

Dave Asprey:

I want to say, thanks for being on Bulletproof Radio, thanks for the work you're doing with the toxic mold project. And people can check that out. I'm really wishing you the most success with this, and just with getting the word out there, because I think you're doing great work.

Dr. Margaret Christensen:

Oh, thank you so much.

Dr. Neil Nathan:

Let me encourage all your listeners. If this is of any interest to you at all, read my book, it's called Toxic: Heal Your Body From Mold Toxicity, Lyme Disease, Multiple Chemical Sensitivity, and Other Chronic Environmental Exposures. I wrote it so that it would be helpful. It has helped already thousands of people to understand what they have and to understand how to get the medical care. And that's the spirit in which I would encourage you to look into it further, because I hope, I'm told that it is a pretty clear way of understanding this bigger picture so you can begin to understand how to approach this.

Dave Asprey:

Thanks again for your work, Dr. Nathan.

Dr. Neil Nathan:

You're very welcome.

Dave Asprey:

Check out moldymovie.com. It is free. You can do that and read the book at the same time. I recommend both because if this sounds like a heap of crap to you, okay, you just heard from an expert who really knows what he's talking about. I've been talking about this for years, and there's a massive community. People who have figured this out, but there's many, many millions of more people who don't know which if any of these are affecting them. And even if you don't have these strong symptoms, trust me, you don't want aflatoxin floating around in your house. Why? It's the number one cause of cancer. Actually it may not be the number one cause of cancer. It's the most cancer causing substance we know. But it doesn't mean it's the number one cause, different, do the math. So this just matters to all of us. And if you want healthy kids and you want reasonable healthcare costs, we've got to solve this problem as a world.