Announcer:

Bulletproof Radio, a state of high performance.

Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. Today's guest is going to talk about something that is near and dear to my heart, well, actually more maybe my lungs. We're talking about toxic mold. She's a functional medicine, interested party about 15 years ago, and she's trying to figure out why her entire family was basically wrecked. She's already a successful OBGYN, but she didn't know. It's like, "Why am I sick? Why is my husband sick? Why are my kids all tired, cranky, and just having weird stuff going on?"

Dave:

It turns out you've heard from so many people that are on the show. It was a toxic mold issue in her house. She learned about chronic fatigue, fibromyalgia, autoimmune issues, hormonal issues, neurological issues and psychiatric issues from biotoxin illness, all of which I have enjoyed. Okay, I didn't really enjoy them, but this is something that's affecting 100 million people and at least 100 million structures and probably more than that, because even if you don't feel it from the structure, and if it's moldy, someone there does, and then they treat you differently, which is not cool.

Dave:

We are going to talk about molds with a full-time functional medicine practitioner who knows it because she lived it. Those are always the best kind of people to talk with. Her name is Dr. Margaret Christensen. 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. 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:

It's interesting because I want to go deep on hormones with you. Literally three days ago, a good friend of mine, someone I really care about, who's a fitness influencer online, she's like, "Dave, I've been trying to figure out why am I gaining weight? I'm a fitness influencer. It doesn't make any sense. I'm doing everything right." Then she finally got a mycotoxin blood panel. Surprisingly, it came back with ochratoxin, which is the stuff that I take out of my bulletproof coffee beans, and zearalenone.

Dave:

Talk to me about hormones and that specific mycotoxin. Tell me about the interaction there.

Margaret:

Well, I mean, hormones are a huge issue in terms of what mycotoxins can do to disrupt it, and it happens really in four different ways. Well, I mean, 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 mimics. It's 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.

Margaret:

We can have mycotoxins that actually look like and or attached to thyroid receptors, testosterone receptors, estrogen receptors, et cetera. That's one way, this hormone mimetic way. Another way that you can see hormonal disruption is directly through the limbic system, the olfactory nerve, which is the nerve that's in your nose, ends up going directly back into the brain, into the part of the brain that's called the limbic system, which is made up of three major parts, one of which is the hypothalamus.

Margaret:

Some people may have heard about that. That's the 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. Mycotoxins, by the way, do dissolve cell membranes.

Margaret:

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 infertility. 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.

Margaret:

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. If you've killed all those off or you disrupted them, you got a lot of yeast or dysbiosis happening, unhealthy bacteria. Then, again, that's going to impact your hormonal metabolism. 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.

Margaret:

The body becomes so stressed. You're pouring out cortisol. You're pouring out adrenaline, and then that get disrupted. Actually, back to the original, in the hypothalamus, there's something that's 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 asked is, "Has there been a toxic mold exposure?"

Dave:

Do you smell like a mop anywhere in your life? That's a good one. Has there been water inside your house where it doesn't go? 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. 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.

Dave:

Do you find people who are just so poisoned by mold like there's no hope?

Margaret:

There's always hope. There's always hope. There's always hope. Again, it's a multifactorial challenge. The way I approach it is I'm not just dealing at the physiologic level, the physical level, of course, using binders and to pull things out and upregulating detox mechanisms with things like glutathione. 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.

Margaret:

It's multiple and accumulated 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, again, your limbic system, again, that's your fight or flight mechanism in the body. The limbic 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.

Margaret:

If you've had major traumas in your life, or you grew up in very difficult situations, the memory center of the brain is going to remember very small things. The amygdala gets stuck in the on position all the time, keeping you in fight or flight, sympathetic overdrive, your adrenaline running a lot all the time. It can get stuck in that position. That makes it very difficult to heal, so I think it's super important, again, when we're treating.

Margaret:

I'm treating sinuses to try and decrease the inflammation in the olfactory nerve and in the hypothalamus. Again, if we're talking about really super sick, then I'm using things like nasal peptides, RG3 and BPC 137 that helped to decrease inflammation in the sinuses. Then we're having folks do limbic system retraining along with all the other things. I also use a lot of membrane lipid therapies to repair damaged cell membranes and mitochondria.

Dave:

Talk about that a little bit.

Margaret:

Well, I was just at a conference with the very world renowned cell membrane biologist. Her name is Patricia Kane. She really has pioneered the understanding that cell membrane health is absolutely critical to any chronic illness, particularly if you're looking at neurological and cell membranes. That's the skin on the outside of cells. We've got 10 trillion cells in our body. Then inside those cells are organelles, particularly the mitochondria.

Margaret:

They also have little membranes. Those membranes are made of two layers, what are called phospholipids. It's water soluble on the outside, and there's little fatty strings on the inside. That cell membrane should float around like having olive oil in between it. Then that way, you can pass oxygen

and nutrients in, and you can get toxins out and energy out of the cell. Unfortunately, that is where the fat soluble toxins go. Whether you're talking about mycotoxins or Lyme toxins or heavy metals, they get inside the cell membranes on the outside of the cell and inside the mitochondria.

Margaret:

That's what poisons them, so learning how to heal that and using what are called bioactive lipids to help lift out toxins and replace them with new healthy lipids, including things like linolenic acid, linoleic acid, gamma linoleic, GLA. Those are all important pieces in recovery, especially if you're talking about these really very sick folks.

Dave:

It's interesting. I don't want to go too deep into the tech here and into the cell membranes because we haven't talked about some of the bigger issues with mold. I just had Paul Saladino on the show, a guy who I, for some reason, just genetically wired to call James Saladino even though his actual name is Paul Saladino. We talked in pretty great length about the 1.8% of the fat that's in us that is actually supposed to be linoleic acid, and how getting higher amounts of omega six acids seems to not be particularly healthy for people. With mold people, what's going on?

Margaret:

See, that's... Patricia Kane would completely and totally disagree with that. Unfortunately, again, what you have to understand about and learning about fatty acids is that there are different forms of them. If you have saturated fatty acids in any sort, then that's the problem, but linoleic acid is found in things like sunflower seeds and pumpkin seeds. It's a bioactive lipid. It vibrates at a very fast pace, and is attached to the phospholipid molecule.

Margaret:

You've got a phosphorus group, and then you've got these two phospholipids that hang off of it, and you need that linoleic or alpha linoleic acid.

Dave:

The alpha linolenic wasn't a big deal, but it was the linoleic acid in particular in abundance that seemed to be the problem, but not the CLA. CLA was good, but just free form linoleic acid. I've definitely experienced that when I cut my free linoleic acid even as a guy who had a lot of toxic mold and still has some sensitivities, but really, I'm doing pretty well compared to how I used to be. I have found that-

Margaret:

Well, that's [crosstalk 00:11:38].

Dave:

... that it probably is overrepresented in the membranes of a lot of people.

Margaret:

Well, again, those are often processed heated oils, and that's the difference. You don't want heated oils when you're doing this. This all has to be raw, cold pressed and all that. Anyway, I do see therapies.

That's incredibly important again for hormones. You have to have all of the lipid substrates in order to make good hormones.

Dave:

I think you're onto something there. Raw egg yolks have been a major part of my healing.

Margaret:

Yes.

Dave:

Just from my cognitive performance, testosterone levels and GED, you get phospholipids and even arachidonic acid you do, and even sunflower lecithin, from cold-pressed, refrigerated sunflower lecithin granules, it's something that I think is actually really good for cleaning up your membranes-

Margaret:

Yes.

Dave:

... but you don't necessarily want to go out and eat a bunch of sunflower seed oil, which is a different product.

Margaret:

Right. Again, if you understand... Even fish oils, all the fish oils on the market are all heated at 500 degrees. That's actually changing their bioactivity and changes how they impact things like hormones. That's a whole nother... Eat caviar and ceviche and...

Dave:

My favorite is ikura, the fish eggs from salmon. In fact, the fish oil that I make or krill oil as the case may be is made from herring roe. We're the first people to put that on the market.

Margaret:

Awesome.

Dave:

It was a waste product before, but fish egg oil is a good deal. I'm with you there. We've gotten deep in the cell membranes. What happens with people who either have mold and don't know it, which is a huge number of people listening to this, or people who just don't have mold, and they pay attention to their cell membranes? What kind of effects do you see?

Margaret:

Again, that just improves everything from skin tone to, again, healthy longevity, and, again, mitochondrial function, and your ability to produce energy is huge. That's the problem. You know this. I mean, all the chronic disease that we see in this country is environmental. I mean, there's a huge amount of environmental component.

Dave:

I think you're right.

Margaret:

We have all these fat soluble toxins that are getting in our cell membranes and into our mitochondria creating these problems. One of the challenge with mold toxicity, again, is you may be... Like I did, I grew up in the East Coast. We lived in a house with basements. There was multiple exposures, moldy dorm room in college, cheap apartment.

Dave:

I've had all of those too, right?

Margaret:

Yes. Unfortunately, it builds up over time, and then you're getting sick and you get put on antibiotics for X, Y, and Z. You don't realize, and you get fungal overgrowth. You disrupt your microbiome, and then your really stressful job. It's never one thing, and then maybe you've had a bunch of other exposures to other toxins in the house, petrochemicals, makeup, whatever it is. We're filling up our bucket, and then you have that last exposure.

Margaret:

That's what happened to me. I was an OB/GYN. I had four kids of my own. I give them all my good fats, and then I was staying up delivering babies for 16 years.

Dave:

Those mean little kids will just suck the fat right out of you, the marrow from your bones.

Margaret:

That's right. Yes, that's right. That's one of the reasons, again, we tend to see women present very differently than men. When we had our interview for the [Toxic] Mold Summit, you talked about how do men present. Women tend to present differently with much more likely to have autoimmune issues, again, severe chronic fatigue, some of the fibromyalgia issues, and autoimmunity. Testosterone helps to protect men from autoimmunity. Anyway-

Dave:

I was very fortunate that I had low testosterone, in fact, lower than my mom when I was 26 when I first measured it, so I got all the women's issues from my toxic mold exposure.

Margaret:

Wow.

Dave:

That means she's going through as me, and man boobs to [inaudible 00:16:01]. I was like, "Gee, thanks, guys. I really love that." If men... You said they feel it... that testosterone is protective for men. Does that mean women who have been exposed to mold might want to start taking testosterone?

Margaret:

Well, I mean, that's certainly something I measure. I don't just willy nilly give people testosterone. I know there's a lot of people out there doing pellets. I'm not a big fan. I see all the disasters.

Dave:

What's a pellet disaster?

Margaret:

Well, you get way high levels. Theoretically, you're not supposed to, but you can get super high levels of testosterone in the body, and then hair falls out. You start getting acne. You start growing a beard, heavy bleeding. In men, I've had two men who've had splenic infarct, so their spleens. They've lost their spleens because their hematocrits went too high. Their blood count levels went too high.

Dave:

Wow.

Margaret:

Actually, I use testosterone every day in my practice, but I'm measuring. I'm cleaning up the gut first and the liver first, and making sure everything else is working okay so...

Dave:

Awesome. It's interesting. I've had pellets a few times, and I've been on testosterone most season since I was 26. I went off for three years when I was formulating the Bulletproof Diet just to test whether it would work, but I feel better when my testosterone levels are around 800. It's very hard to keep mine at 800 at my age with just diet, so I don't mind cheating. When I use pellets, the levels weren't high enough, and I started getting some hair loss here that I didn't have before.

Dave:

I was like, "Wait, was that the pellets, or was that something else?" I did another round of pellets. I'm like, "Great, I think that's the pellets." I've never had it from cream or injections. There's something about the dose and how frequently you do it and all, which is important. Something that you mentioned when we were talking earlier before the show was that there's a 95% divorce rate in moldy household.

Margaret:

Yes. Well, this is Dr. Shoemaker's data. Dr. [Ritchie] Shoemaker wrote a very famous book called “Surviving Mold.” He's been one of the early pioneers in this whole area. I know that you made a documentary with him. Again, he was just noting that because everybody is sick and very irritable and, again, psychiatric also, so we can see some severe psychiatric illnesses. I'm very intimately familiar with that because I have a son who's very seriously mentally ill because of this.

Margaret:

You get everybody super irritable, not understanding, or dad is maybe not as sick as everybody else. That's often the case if the home is a problem, because he may be out working. Mom is more likely to stay at home, and the little kids are there all the time. Everybody's sick and just irritable as hell and

psychiatric, anxious, depressed, bipolar, psychotic, all of those things. When you don't understand why, that's one of the things that households tend to fall apart.

Margaret:

One of the things that I see a lot in my practice, again, is that... Often, the women and children are sicker. Dads may be... They may be gaining weight. They may be having erectile dysfunction or hypertension, but they're not recognizing that that's part of it. They don't understand why their spouses want to spend all this money and have to clean up the house with molds, and they think, "Oh, this is BS and all that." I can't tell you how often I see that.

Dave:

I'm going way back to when I lived in a really... I grew up in a moldy home, and all the symptoms as a kid, and then I got relatively cleaned up pretty healthy and moved into a place that turns out had mold. I didn't quite understand what was going on. But magically, I gained back 30 of the 50 or 60 pounds I had lost. The person I was with at the time, she also gained a bunch of weight but started just getting mean.

Dave:

I'm sure it wasn't a very patient person either, but there was marked personality changes, dramatic nightmares, to the point that I didn't want anything sharp in the bedroom, because she would wake up and move stuff around and do things to the point that one time, I'll never forget this. She got out of the bedroom where the mold was. It was against the wall where a headboard was on the other side of it. A neighbor's water heater was leaking. It was probably stachybotrys, we believe now, in retrospect.

Dave:

She comes down and she says, "How dare you?" I go, "What did I do? I'm just watching TV?" She said, "You're turning the lights on and off and all this stuff." I said, "I didn't do it." She said, "That's it. I'm done." She grabs the car key and storms out of the house. I'm sitting there stunned like, "What just happened?" I didn't even know. I thought, "Okay, I don't know what to do. Maybe she'll come back."

Dave:

About an hour later, she stumbles in, and she goes, "What was I doing asleep in the car?"

Margaret:

Wow.

Dave:

The entire interaction, she was asleep, and she didn't know she was doing it. I mean, she could have driven asleep. There's rare cases of that. Fortunately, she didn't, but I didn't know because her eyes are open, and she was communicating. That's how bad toxic mold can make you feel. For me, it makes me super tired and drugged and brain fogged. I can't remember anything, and it makes you angry like yell at your kids or yell at your spouse. You'll blame everyone, because the body's looking for what's causing it.

Dave:

I'm happy to hear that date. I didn't realize that was a Shoemaker number, but it does wreck relationships, and the number of employees I've had over the years who've had toxic mold and just

gotten off the rails. They get really sick. They get emotionally reactive. They don't show up for meetings. If they do show up, they're just acting bizarrely. It's not their choice to do it. It's not because of some moral issue. It's like someone's drunk, right?

Dave:

But when you're drunk, you get to choose to drink and enjoy it, but there's none of that. It's just the stuff. I'm glad that you did the mold summit, because it's one of the things... If there's nothing obvious going on with someone, if you're eating cheesecake and French fries every day, all right, we get it. We can work with you. But if that's not it, and you're actually doing all the things that are supposed to work, and you're just feeling like garbage and things are not working, you have to check this out.

Margaret:

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? If you have sinuses that are full of mold and you got all this inflammation, that's impacting your frontal lobes. That's the area right behind your forehead, and or, again, the limbic system. You're creating anxiety. I mean, one of the very common symptoms is anxiety that doesn't really have a source, and so you're anxious all the time.

Margaret:

You can't sleep. Sleep disruptions and insomnia is another huge symptom of this, and so it makes sense. But now, there's so much data looking at things like, again, psychosis and bipolar, and even, again, 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, again, behavioral issues, psychiatric issues, and neurodegenerative diseases, including Parkinson's, Alzheimer's, autism.

Margaret:

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, and again how common this is, this mold rage. It's just...

Dave:

The mold rage thing. I mean, I've done all kinds of neurofeedback. I'm generally a pretty chill guy. I'm at peace most of the time and all. Maybe three years ago, I went for a bike ride with my wife and the kids. I didn't realize it but this was at a quarry where the soil has been disturbed, and there's something growing there. It was a really rainy, nasty British Columbia fall day with moisture everywhere and all. I started yelling at the kids for like riding too far ahead. I didn't even know what it was for.

Dave:

I'm like, "What the..." I recognized this. Mom's like, "Dave, what is going on?" I'm like, "I don't really know," but it was like a drug, literally like a drug. 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," but I realized, "Okay, when it's super moist, I just don't go near there because there's something bad." I don't know if it was an industrial thing, but something changed the biome of the earth right around there.

Dave:

I'm afraid of the place, because I don't like feeling that way. I generally don't have those symptoms anywhere. I can go to a place. I can sense it's moldy, but there's a few species that get me. Some people say, "Dave, you're a delicate flower, snowflake." How common is this stuff? Those people, they make me want to kill. Just kidding. Am I the 1%? Am I the 20% or more?

Margaret:

Oh my gosh, no, I mean, 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. Then at the time when all this was happening, this was actually 18 years ago, my son was nine, and he was having hallucinations. He got diagnosed with psychosis not otherwise specified at age nine, and put on an anti-psychotic.

Margaret:

He was having ADD, ADHD, asthma, allergies. Again, these are all symptoms in children. I just wrote a blog about how it shows up in kids, and so put on all those medications, and finally was off the anti-psychotic but then at 18, 19, he started having other psychotic episodes, and then got diagnosed with schizophrenia and then ended up living... Again, this is before I knew... It took me eight years to figure out after living in this house where everybody was sick what was going on.

Margaret:

By that time, my kids were already in their teens. As you know, you're a parent, I mean, your children and your teens, they're not interested in listening to anything you have to say. By this time, also, my husband and I had divorced because of, again, unbeknownst to all of this. He's 28 now. He's been hospitalized over 20 plus times. We know that 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 Lyme.

Margaret:

Well, he got bartonella that, again, has never been officially diagnosed, but I know that that's what he has because he had all [inaudible 00:27:39]. Again, this is what we're seeing is all these psychiatric patients. I mean, Shoemaker talked about it. He said, "If you went into any psych ward and started doing mycotoxin testing on folks, you'd get 80%, 90% positive. That's why [crosstalk 00:27:54].

Dave:

I would guess 90.

Margaret:

90.

Dave:

In prisons? Prisons themselves are terribly moldy, which drives violent behavior, but the people who go to prison, 85% of them have brain dysfunction. A huge percentage of that is caused by mold in the environment. We got to have clean schools and clean places of employment and things. That's pretty shocking.

Margaret:

These landlords too need to be responsible. If you're a slum landlord, you got these crappy housing, again, and you are a lower income person, and you don't have the ability to build something or live in a nicer space, and again... We see so much housing that is just terrible and poor air quality. Like you said, the schools, same thing. To me, there is a much bigger picture here that needs to be addressed. This actually brings us back to COVID too, which we're not talking about the fact that air quality impacts the immune system and the lungs.

Margaret:

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. Your adaptive immune system starts pouring out cytokines and antibodies. Those are the folks that are really susceptible to getting super sick from mold.

Dave:

People with chronic inflammation, which there's a very high correspondence. You live in a moldy house. You're likely to have chronic inflammation of one sort or another. Are you going to be in the 20% who gets symptoms, or the 80% who don't? You're likely to be an 80. Maybe people are triggered by arguing about those numbers. Pick whatever numbers you want. The majority of people don't get symptoms. I will put it that way.

Dave:

I think mold would be one of the biggest things I'd control for if I was to just pick for that.

Margaret:

There's ways to go about doing that too in terms of improving the air quality in your home and air filtration. There's some simple things that can be done to help that because... This is also tied back to neurodegenerative diseases. You have your autoimmune issues. You got your psychiatric issues, and then you got your neurodegenerative diseases like Parkinson's, ALS, MS, Alzheimer's.

Margaret:

Again, mold is one of the big triggers that are underlying some of these things, but the good news, Dave, is that... You and I both know that there's a lot of things that we can do to heal ourselves. I don't want to freak everybody out.

Dave:

I'm so happy that you just named pretty much all of the neurological diseases. Most of the research on those that I could find, that's a lot of it, went into my book called Headstrong, which is about mitochondria and the brain and increasing cognitive function, because one of the things you do to increase cognitive function is you stop doing the things that give you neuro degeneration. Magically, brains that are performing really well don't degenerate as quickly.

Dave:

Who would have thought? It's very advanced science, cause and effect. Let's talk a little bit more about hormones. Give me the woman hormones symptoms. We kind of touched on, but I want there's just the list for listeners.

Margaret:

Sure. Sure. 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. I mean, waking is a huge one. I think those are the...

Dave:

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

Margaret:

With men, we're to see things like hypertension, cardiovascular issues, blood pressure. The 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, and again, disrupting testosterone.

Dave:

Night sweats are another thing I used to have that were solely bad.

Margaret:

Totally.

Dave:

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. I'm like, "I'm not going there." Every now and then, it happens. I'm like, "I remember, this was 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 restless leg syndrome either.

Margaret:

Yes. Absolutely. Again, that-

Dave:

For men and women, right?

Margaret:

That would fall in the neurodegenerative disease category. Absolutely, restless legs can be a big one and-

Dave:

Mine get turned on. If I eat food that has mold in it, my legs start to twitch, and I go, "Oh yeah, I remember that," but it's gone the next day if I take binders. It's fascinating.

Margaret:

I also mentioned cancer because... 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? With mycotoxins, 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.

Margaret:

If this part of the immune system is not working, you may be missing, again, those bad guy cells that are out there. Then this guy, this part of the immune system, the adaptive is what's so firing all these cytokines off and antibodies off. Again, a lot of it has to do with genetics. I think that those are really important pieces. If you're looking at breast cancer, uterine cancer, again, all these hormonal cancers, I want to know.

Margaret:

I've had several women with breast cancer, and it turns out they were in very moldy, incredibly moldy environments. I think, again, if you have cancer or any kind of immune system suppression, you absolutely have to be in a house that has very clean air quality as part of your recovery.

Dave:

All right, now, you've talked about 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. There's nerve degeneration, and there's the behavioral side like schizophrenia and ADD and ADHD. Is there anything in that list there that you think we didn't hit on that people ought to be aware of?

Dave:

There's hundreds of thousands of people who are going to listen to the show, and a lot of them are scratching their head and going, "Well, maybe I got into biohacking because something wasn't right." What else would be on that list of neurological stuff to check out?

Margaret:

Again, any kind of tremors, weakness.

Dave:

Okay.

Margaret:

Tremors and weakness, unusual pain syndromes as well.

Dave:

Oh, chronic pain.

Margaret:

Yes.

Dave:

Yeah, it's a major trigger. You get rid of the mold, the chronic pain goes away, right?

Margaret:

Huge. It is absolutely huge.

Dave:

There's a lot of pain doctor listening though the show. You guys need to treat mold and use a little bit of light therapy and the normal stuff, use topically and it will go away. It's a part of the thing.

Margaret:

This also comes back to... One of the areas that we did not touch on is our chronic infections like Lyme, chronic bacterial infections, excuse me, and viral infections. When you're suppressing the innate immune system that is supposed to keep... If you've gotten bitten by ticks 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, or leukosis.

Margaret:

If you talk about weird neurological symptoms and pain, again, oftentimes, you'll see that molds-Lyme combo. For all the people out there who have Lyme and have been treating for Lyme for years and years with antibiotics and stuff, where is the mold? Look for the mold first.

Dave:

It's not Lyme.

Margaret:

Yes, thank you. Yes, look for the mold first. I'm part of an organization that I would encourage even all the late people to join. It's called I-S-E-A-I.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 with Lyme have been treated for years and years and years with antibiotics, and not getting better.

Margaret:

What do the antibiotics do? Well, they're destroying your microbiome, and they're destroying your... impacting your mitochondria. It's really been... They've been living in a moldy house the whole time.

Dave:

You mentioned some stuff earlier about air quality. Let's say someone's like, "Yeah, I kind of had a leak behind the sink and 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?

Margaret:

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 are going to attempt any kind of little DIY, that can help you out, but please, don't just get in there with a bottle of Clorox, and start bleaching stuff.

Margaret:

I just saw a Clorox commercial after a flood, and all of these walls were being sprayed down with Clorox. I was just appalled. Anyhoo, there is a-

Dave:

It works great on non-porous surfaces. If it's on your shower, if it's on a tile or a 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. Once it soaks in, I promise you that when you kill most of mold, what comes back is pissed.

Margaret:

There we go.

Dave:

It grows really, really well.

Margaret:

Hydrogen peroxide is a better option. 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 very concentrated. Hydrogen peroxide 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 HFAC system. Again, that is also one of the places that it hides, that mold often hides is particularly in the supply plenum if you have central heating there.

Margaret:

You can use also ultraviolet lights shining 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... I 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. We didn't even touch on EMFs, but that's a whole nother piece, electromagnetic fields that are coming off all of your electronic stuff.

Margaret:

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 turn off your Wi-Fi router, that you don't sleep with any cell phones near your head, you try 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:

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 it was that much. 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. You can say, "No, that actually does work." 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.

Dave:

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. I don't mean like quantum woo 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. I do all of those EMF safety things.

Margaret:

That's good.

Dave:

I think it's worth paying attention to that. Now, you talked about high quality air filters. I've had a couple different companies that I recommend sponsor the show. In fact, we'll probably end up having one of them come in on this one. I'm also going to throw my hat in the ring for Homebiotic, which is the probiotic mold cleaner. It's a company I started five years ago because I just got so tired of you move into a nice house, and then mold sprouts. You're just like, "Ah, what just happened?"

Dave:

I do inoculate my home with a probiotic. I spray it around. We have a new test kit for mold as well with Homebiotic, so people can test their home with that. You can get an army test, which is a way of testing what's in the air versus what's on surfaces with the tests that I have, which is a genetic test for mold, which is interesting. When you get all this together like, "Okay, either you have a problem or you don't," and then you want to be preventative... A lot of people can't afford to move, or you have a lockdown.

Dave:

Then what you're saying is have professionals clean it if you can. If not, I just want to warn you, not you, but warn the listeners. When I was filming Moldy, I had a film crew of young, strong, camera wielding guys. Then we had our producer. Actually the guy who did the music is Eric Troyer from Electric Light Orchestra. I got to travel around with him for a while and hear stories about Meatloaf and all the guys he's played with. That was a fun movie. Anyhow, we're going to this place, and we put on full-on Tyvek, like the stuff you'd see when you fly with COVID, full Tyvek suits, duct tape the arms, gloves, full respirators.

Dave:

Camera crew does the same thing. Everything in baggies, and we go into this incredibly moldy house that's being essentially repaired, although it should have been demolished from our perspective. I'm in there. We're tearing stuff down. We're getting camera shots of all this stuff. Afterwards, I'm racked. I'm like, "Man, I'm so tired. I do not feel good. I can't focus. I'm kind of in another land with all of the protective gear." Now, okay, fine, I'm sensitive, but the young guys who have up till this time thought mold was BS, they're healthy.

Dave:

They're young. They're not in the HLA, DR genotype to be mold sensitive. All of them that night were like, "Man, I feel like I'm hung over. I didn't drink." All of them were like, "You know what, you're right. I thought you were nuts. I can feel it." That was with protective equipment. That means that if someone, listening to this, you are in a house that's making you sick and say, "Oh, I saw the mold. I'll put on a zip up suit and a respirator or probably a sock," the way they're saying masks do stuff."

Dave:

It's not going to protect you very much. If you can get someone who's not susceptible, is not sick, who has the right equipment and the right technology to go in and clean it, it's worth it. If you can't, just understand everything you're wearing. Take a shower when you're done. Bind your toxins. Do what you can and...

Margaret:

Sinus rinse. Sinus rinse. Yes, sinus rinsing is the... 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, whatever.

Dave:

I'm remembering that too. In fact, I'm going to tell you guys, Google the Bulletproof. I think it's on my Dave Asprey blog, but Google Bulletproof. Just google Dave Asprey sinus rinse. I'll put the thing up here. You can get a neti pot. Neti pots are dumb. A neti pot is this expensive thing. Sorry if you love neti pots, and you're like, "The little teapot." You pour it in one nose, and out the other. The yogic way of washing your nose, you take warm water, and ideally, it's clean water, not just from the top because you can get weird parasites in your nose that way, so you should boil it first.

Dave:

You take salt, maybe xylitol if you want it for the bacterial stuff and then drop of iodine. You bend over at the waist like a dippy bird, and you stick your face in a bowl of it, and then you snort. You drink the water up through your nose, and it comes out your mouth. Don't worry, you won't choke. You fill your mouth with it, and you spit. You do that a couple times. The suction creates a current along... I was one week away from sinus surgery when I started going down this, and I did not have sinus surgery.

Dave:

This was when I was maybe 28. This is what saved my brain and my sinuses. Literally, you just snort spit, snort spit, snort spit. It's very erotic for your partner to watch you do that. Okay, don't do that. Oh my God, what a difference. I'm happy you're talking about rinsing your sinuses. When I fly, I don't get sick because my immune system is used to flying, and I T-cells that work and antibodies. I'm regularly exposed, at least I was, before this lockdown that reduced immunity for everyone. I always do that when I get to the hotel, because it works.

Dave:

Thank you for making me think of that.

Margaret:

Well, 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. We have beautiful pictures of surgeries that he's done, but he's using something called amphotericin, which is an antifungal, special rinsing and a special device to get into all the sinuses and rinsing people.

Margaret:

Overnight, you have practically cures of some neurodegenerative diseases, some psychiatric issues, et cetera from people who got chronic sinus infections.

Dave:

Where is he based?

Margaret:

He is in Atlanta.

Dave:

Interesting. It's a really big deal, the fungal stuff in the sinuses. When I was a week away, I read this old book called Sinus Survival that talked about neti pots. I ended up finding about the yogic thing later. The difference for me was 15 years of antibiotics every month for strep throat and then sinus infections [crosstalk 00:47:12] sinuses.

Margaret:

Oh my God, that's, boy... You talked about, again, increased risk for weight gain and cancer. Oh my God, that much antibiotics [inaudible 00:47:17].

Dave:

Well, I had everything.

Margaret:

[crosstalk 00:47:18].

Dave:

That's why when people are saying, "Well, how are you going to live to 180, I'm like, "Look, if I can do what I'm doing with that kind of just a complete shit show in my background, I know the causes because I had to hack it. I had to do what I did to get the knowledge that I have," but the fact that it's out there, and you can see some when you walk in like, "This place is moldy, and that person is grossly obese. That person their faces exploding with those subterranean pimples that are caused by inflammation, not by anything else, and that person is wheezing."

Dave:

All of this, it's just right there, but people don't know. I think your [Toxic] Mold Summit is going to spread a lot of knowledge about this because... Two of my companies have mold at their core. A lot of the Bulletproof supplements work really, really well for people with mold. They work fantastic with people who don't have mold, but there's sometimes a little ingredient or a little change. I took out the OTA because it's causing cell responses from the coffee and all.

Dave:

I believe so much. No one has yet put together a mold summit. I was thinking of doing this for the last five years, but it's so much work to do a summit. My team just wasn't up for that and all the other things we're doing. You finally went out and did the interviews beyond just the one documentaries worth that I did. I think for people who are listening to this and have mold issues, they need to check out your [Toxic] Mold Summit for sure.

Margaret:

Well, I interview... 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 whacks both in, "How does it show up symptomologically, and then what do you do?"

Margaret:

What are all the different approaches from very basics to very advanced, things like using, again, nasal peptides, et cetera and things IV ozone, IV vitamin C? Those all can be helpful. Then also, we also cover how do you assess a home and or a building? Then what do you do and how do you remediate safely? Then, again, also the people who have severe multiple chemical sensitivity pot syndrome, again, chronic fatigue, fibromyalgia and even mystery illnesses. I guarantee you a huge piece of that is mold.

Dave:

Well, thank you for going out there and saying it. I love it that you can say it. You've got that MD after your name. It is possible without even knowing what the cause is, which is funny, because Doug Kaufman, we mentioned earlier, know the cause is the name of his body of work in his books. But even if you don't know what the cause is, you can hack your biology, because you're saying-

Margaret:

Absolutely.

Dave:

... if I do this, does it work? Yes. Then the cause, you can say it's caused by leprechauns. It's caused by quantum woo, or it's caused by mycotoxins, right? You can actually test each of those things and see which one it is. I feel like we have enough knowledge about this mold causes a direct inflammation from its essentially cells, and this mold makes a toxin that does this via this pathway and triggers this cytokine. Now, there's so much science here that you can no longer ignore it, but you can say, "Oh, there's no mold here. I'm the landlord. And oh, I didn't want to put in the expensive air conditioning, those stuff that has a UV light and an ionizer, et cetera."

Dave:

Now, there's an issue though. Maybe you wanted to put it in, but no one will rent your building if you do. If you make a clean building, yikes, you might have no tenants because we have an expectation that our buildings, that our rent is dirt cheap. We're not willing to pay for quality, and we have an expectation that our food is dirt cheap, and we're not willing to pay for quality. You're going to get moldy food. It's called storage toxins and field toxins. You're going to get moldy buildings, unless you go for a smaller place that's clean, unless you eat less meat, but it's grass-fed and mold-free.

Dave:

The thing goes on. I hope this drives people to say, "Look, I'd rather have less but good instead of more but crappy." That would change the world, just that that way of thinking.

Margaret:

Amen.

Dave:

Now, what's your long-term goal with the toxic mold project? By the way, toxicmoldproject.com is the summit that you're putting together. Are you going to do this annually? What do you do?

Margaret:

This is the second time I've done it. Let me get through this one, and I'll tell you.

Dave:

I think people don't quite understand how much work it is. You could-

Margaret:

As long as [crosstalk 00:51:58].

Dave:

I mean, I'm going on almost 800 episodes of Bulletproof Radio, and you could look at that as an 800 episode summit where I'm finding experts and interviewing them. I do two a week, every week, and I have for years. It's a team of several people and a process. I don't do the launch thing that you do, but man, you have to care about something in order to do it, and you deeply care because it messed with your kids and messed with you.

Margaret:

It messed with my kids. It messed with my marriage. It messed with... My former husband has Parkinson's, so this is a big deal. It's near and dear to my heart. If you're asking me what is the bigger goal, a lot of it is awareness, and then, "What do we need to do at a public policy level to improve air quality and improve apartments and improve schools and improve..." This is a huge piece. All of you out there listening, all the teachers, I want the teachers speaking up and learning this because they're often very effective, and politicians.

Dave:

Teachers are some of the sickest people because the schools are some of the sickest, and those kids who just can't behave in class, I was one of them. It's because you put me in a moldy classroom, and of course, it's not because the kids are bad kids. Well, there's that little Johnny. He was bad, but everyone else was good. That's just how it works. Well, I want to say thanks for being on Bulletproof Radio.

Margaret:

Thank you so much.

Dave:

Thanks for the work you're doing with the toxic mold project. 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.

Margaret:

Thank you so much. Tune in everybody. It's free, August 17th through 23rd, and then the following weekend. There's so much great information in there, including a wonderful interview with Dave that we hope that you'll consider actually purchasing it to keep it because the material is so dense and so big.