# Build Resilience Post Toxic Mold Exposure Transcript

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## Introduction and Guest Welcome

We had a massive flood in Boulder 2013. And nowadays, sadly, you look at the news and there's floods everywhere and I bet. And like me, when you see those things on the news, isn't your first thought like, oh my gosh, those people, poor people, they're gonna have to deal with mold, right?

is doctor talks. Welcome to another episode of Mycotoxins, Mold and Chronic Illness Summit. I'm your host, doctor Ann Shippy, and today we get to talk to Doctor Jill Carnahan.

She is just one of the most incredible clinicians and also one of my favorite people on the planet. She is a functional medicine expert. She's board certified in family practice and also integrative holistic medicine.

She's the founder of Flatiron Functional Medicine Clinic. She teaches, she speaks, she writes. She is on a mission to help humanity. And she has been very, very productive.

This last year. It's just mind boggling how much she's gotten done on top of all the incredible things she's doing all the time. She's finished a book, and she's also accomplished a documentary.

Thank you so much for joining us. Is there anything else you want to add to that? Did I miss anything important? No. Thank you. And it is absolutely a pleasure to be with you.

You are one of my favorite people. It is kind of like, we do have coffee publicly with everyone talking about mold today, right? Mold has been such an important part of our journey.

And you've had, you know, some pretty big run ins with health issues with breast cancer and Crohn's. And I just thought maybe we could start out with letting people know how molds impacted you.

And, so that people can really get a flavor for this is personal, right? Yeah. You know, I always love to share story because we all have a story and there's listeners out there.

I'm sure some of you are listening because you have a story or someone you love is is dealing with mold.

## Jill Carnahan's Early Mold Exposure and Health History

So I'm going to tell you briefly where I've been, because I think it'll frame my passion and purpose and some of the stuff I've learned. So I grew up on a farm in central Illinois.

You would think it's the most idyllic Norman Rockwell US kind of environment. I was one of five children. My mother was a nurse and retired to raise the five children.

We had organic food and, you know, lots of, like, a half acre garden. We'd freeze vegetables and fruits and all kinds of things. So lots of wonderful, nourishing, holistic principles.

But unbeknownst to me, this beautiful, idyllic farm was slowly poisoning me. I was born with some difficult genetics. I always talk about toxic load as the idea of a bucket.

And when that bucket started to fill up over a lifetime, and spill over the top, it typically presents with autoimmune cancer and neurodegenerative things like Parkinson's, ALS, Alzheimer's, or just cognitive dysfunction.

Now, in that bucket, one of the things which is the main topic of your summit is mold and mycotoxins. I am sure I don't know, because I can't go back there and test when I was a child, that I'm sure we had a basement that was

partially Earth.

We stored a lot of food there. I'm sure there was mold on the farm and then grains. I don't know if people know about this, but many grains are stored in bins.

And so you take the grain out of the field, and then you have these big, huge grain bins on the farm where they store the grain until it's sold to whoever's taking that grain to use it for feed for animals, or making corn chips or whatever else.

And that grain in the storage often has a little moisture content. In fact, they actually look at the moisture content. And it's very, very, very, very commonly contaminated with molds.

Now, the dust off that grain I was horrendously allergic to as a child. I don't think it was. It was actually the mold right thing going on. I really looked back and like I thought I was severely allergic to corn and soybeans.

But if we know about grains, and this is one of the reasons I believe that people are on a paleo diet, which is the grain for your diet, actually do better when they have autoimmune is one of the reasons is because grains are the most highly contaminated food source in the U. S., at least with molds.

So I'm framing that because I think my story with mold actually began from birth on the farm with these highly contaminated grains because I was so, so deathly allergic to those grains.

And when the summer would come in that they'd call this red dog. I was like dust and debris that would float around and get all over the grass, get all over everything we owned.

I'm sure it was loaded with mold and mycotoxins, and I would just sneeze in cities and cities and cities take a Benadryl, fall asleep for six hours. And I was miserable.

So I think it began back then. And we also know now part of my story is in medical school, 25 years old. I find a lump. And and, I was diagnosed in my third year of medical school at the age of 25 with a very aggressive breast cancer.

Now, once again, I don't think necessarily the mold caused the cancer, but it's very possible that mold exposure and pesticides, organophosphate chemicals, which are endocrine disruptors, that means they have a hormone like effect on the body in conjunction with a mold that could have weakened immune system.

Might have been the perfect storm for me. Getting cancer at 25. I think mold is and will definitely make sense of it. It's the kind of the perfect storm, because it's so unusual to get breast cancer that young, and especially to get such an aggressive form.

Yeah. In fact, sadly, now many people have heard of 20 somethings even like 16 or 18 getting breast cancer, which is crazy early. But at the time I was diagnosed about 20 years ago, I was the youngest one at my medical center to ever be diagnosed at 25.

So even at that time it was incredibly rare. So I get cancer, I go through incredibly aggressive, three drug chemotherapy, lost all my hair, got really sick.

And as we know, the chemotherapy can be damaging to the gut. And so six months after I get through the chemo, get through the radiation, get through the surgeries, I'm like, okay, I'm through a breast cancer, I'm bald, I'm malnourished, I'm pretty sick.

Back into rotations and six months into rotations, I literally passed out one day as I was taking a patient's blood pressure. I end up in the E. R. myself.

And that night I had emergency surgery for an abscess. And the next morning I wake up and the surgeons like, Jill,

you have Crohn's disease, and Crohn's is autoimmune attack of the gut.

So that was my first role with, autoimmunity. And I really got through that by learning the microbiome and learning how the gut interacts with that and changing my diet, I took out gluten and all inflammatory foods, and within a couple of years, I was back to feeling really great and feeling like complete remission and really that Crohn's was a thing of the past.

So then I went, moved to Colorado, started my practice, was doing great, I was hiking, I was skiing, I was enjoying life, feeling really like all the medical stuff.

All the history of the illness was behind me. And, we had a massive flood in Boulder 2013. And nowadays, sadly, you look at the news and there's floods everywhere, and I bet.

And like me, when you see those things on the news, isn't your first thought like, oh my gosh, those people, poor people, they're gonna have to deal with mold, right?

Absolutely. Because most people don't know how to get things dried out and how to look for the hidden lakes. So yeah, I mean, it's really become quite an epidemic is and more and more with the weather changes and stuff, I just see this wasn't like, oh no, that whole community is going to be like really moldy in a year.

So that's what happened in Boulder. We had this massive flood. Everything got wet. We had, you know, almost $1 billion of damage. And the next year I started having symptoms.

My eyes would get red and irritated, my immune system crashed, and I got sick with everything that came by my brain started having trouble with word finding, so I couldn't remember names.

Just pretty scary as a doctor is right.

## Boulder Flood and Mold Illness Onset

You were. You must have been petrified, you know, and I was. And it's funny because this is one thing I give to patients dealing with more, but I just have such compassion.

I'm sure you understand, too. There's a bit of denial, and I think it's part of survival because mold affects the safe place. We call home. It can be workplace too, so it can be other things, but some environment that you spend a lot of time in.

And so there's a real trauma safety component about mold. And so it was no different with me because I knew if it was an environmental toxin like mold, it was in work or home.

Eventually what happened is I tested my urine. It was very high with echoes of things, which is from the nasty black, a sticky factory. So can you tell me?

And then we went in the basement of my office and found box samples of sticky batteries. So it was really clear there was a connection. Literally, the day I got my urine sample and found out what was in the basement, I never set foot again in the office.

Like, I just literally I left. I had 20 years of medical school textbooks in my library. They're all my office furniture, and I just literally walked away.

The only thing I took was patient records. I started over, I took a temporary office not far from where I'm at now. But, you know, it's funny because this is relevant to your listeners.

We know that you cannot get well if you have ongoing massive exposures. There's just no way that's the foundation. And yet you and I know talking to a patient, that's the hardest thing.

The hardest thing. It's so hard and so hard for me to sit across patient and say, I think your house is moldy, you have to leave. You have to remediate, you have to do something because we know it cost money.

If you're sick enough, you may not be able to keep anything that doesn't go in the dishwasher, right? Yes, exactly. So there's like this. There is a spectrum of what you have to do.

Not everybody has to leave and walk away like I did. But what I realize is help is that the resource we that we can't buy health. And so it's that limited resource that, you know, we can replace all those other things. And it may not be fine, it may be expensive, it may be very inconvenient.

But ultimately our health is so valuable. And I have learned that lesson from my 20s, early 20s because of the cancer, because I realized, you know what?

That day I got told I had breast cancer. Now I'm vibrant 20 years later and healthy overall, but I didn't know at that moment I got diagnosed with cancer if I'd have six weeks or six months or six years.

And when you face that mortality, anyone who's had that, it really changes perspective on living and showing up. And then when I came a decade later with more, I realized, I've got to do whatever it takes to protect my health.

Yes. And things become less important. And you just do with it, do what it takes. And yeah, if you don't have your health, that you have money and you have relationships, it puts all of that at risk, right?

If you have to set up as your best self. So and I think you're like me where it's those hard lessons that we've had that have been the most valuable for us to really learn how to treat our patients.

I'm sure during that following months, other than getting out of the mold and not returning, you learned a lot about how to help your body get healthy and stay healthy.

What were the key things that helped you to get well other than leaving the office? Yeah, so I want to talk about some of the struggles too, because what so often happens.

So when we think about toxic fluid as the bucket analogy, and I'm sure other people have talked about this as well, I definitely like to talk about that because it's such a visual of like when we're born and we know now that the cord blood of infants was 20, 20 years ago.

And and when they were testing in Canada, they did a study on the cord blood of infants. And they found infants born under the womb, had over 200 chemicals in their blood already from mothers placenta, which means now, 20 years later, it's only gotten worse.

And I say that. But you can repeat that said, honestly, I doubt anybody's going to fund it, but I really wish we would. I know because I can't imagine it's not double, triple or worse.

Right? Only ten acts based on what, you know, doing functional medicine almost 20 years. What a difference. Doesn't seem saying it's it's pretty alarming.

I would totally agree. So this idea of load is that we're all swimming in toxic soup. The air that we breathe, the water that we drink, the food that we eat.

The buildings were in. And it can be pretty depressing, right? But if we are, if we are aware of that, if you're conscious of that as a patient or just a consumer and you're trying to not put more water in the bucket.

So you're choosing clean air, I would say clean air, clean water, clean food, that's where it starts. And it can be so overwhelming. Supplements, IVs.

What do I do? Start with the basics and anyone can do this. Even if you don't have a functional doctor, you're not

sure where to start. Clean air. Make sure you have a good air filter right beside me here.

Boom, Austin, you're right in the corner there. And I have five of those in my office, and I have three at home, and I don't have that large of a house.

So it's like I make sure that that the Austin's the clean and you could do another brand. I'm not brand oil but any you want a good Hepa filter with a block filter because that VOC volatile organic compounds is the fumes, the smoke, the benzene from your off gassing.

We just read a study on, if you have a gas stove at your house, which I still do nothing wrong with that, but it will weaken off gas benzene. And they've actually detected benzene levels in the air even if it's not turned on.

So that's one more block that we're not thinking about. And then the mold produces these mycotoxins that are 2.5 microns or smaller, which means they're smaller than a virus particle.

And those will not be filtered by a Hepa filter. So if you have a furnace built, you're like, my house is fine, you're not filtering this box.

## Detox Basics: Air, Water, Food, and Binders

So you need a filter that has a charcoal or zeolite. Internal mechanism to actually pull out those volatile organic compounds. So that's a clean air, clean water.

We make sure we're drinking clean source water. Last year in Colorado, they did a study of the water supplies here, 100% tested, had two high levels of PFAs, which is poly for oh, who did that study?

That's a good one to look up. Do you know I don't I don't get it from you. Yeah. No I don't know who did it, but I don't think that many communities are actually doing the fast testing.

So I, I think that's a really important point because that is and what I saw was like every. Yeah. Yeah. So and so if you don't want PFAs are this is basically polychlorinated.

They are called forever chemicals. And scientists cannot even calculate the half life which means for our generations and generations we're going to have this.

This is going to be there forever. Like we don't have a way to get rid of it, and we don't have a way to even know how long it lasts in the environment.

And this is your Teflon, your Gore-Tex, those products. And they're in like the coatings on your takeout food. They are in all your camping and hiking gear that's waterproofed.

So they get absorbed into our skin. They're in our food supply. They're some of the cans are coated with this, and it is filtered by reverse osmosis or most carbon filters.

So you can filter water. But if you're drinking tap water, even city water, it's in your water, it is in your water. So you need to be drinking water like going through the skin with the showers and things.

Yes, yes. So it's like everywhere. You really need a whole house filter. Yeah. The whole household are 100%. So clean air, clean water, clean food. And I'm going here and I'll tell you in a minute where we went with the mold.

But it this foundation is so important because it's accessible to the people listening. Again, not everybody has a function as an expert or can afford the specialty or the Ivies or the.

There's so many things you can do that are expensive, but I want to be very practical here and get at least a few things that everybody can do and think about clean air, clean water, clean food. And when you put good inputs in

the bucket, you're keeping the water level at bay.

And then in a moment we'll talk about how do we actually bring that water level down. Because as our buckets filling, if we aren't consciously choosing every day to practice detox, we're behind the game and we're going to fill that bucket up.

So you literally have to be aware of this. Don't be afraid. But if you're not practicing so clean air, clean water, clean food, clean food. I'm salmon, one of the most toxic things in the world to be going out to eat and getting salmon twice a week.

You're not doing yourself a favor unless it's wild caught usually that sockeye cod a coho. Sorry. And King is are the top three for wild and it has to be wild because farmed is a whole nother issue because it contains PCBs.

It contains all kinds of toxins and then just local grown if possible organic as much as possible. If you can't afford it, look at the Dirty Dozen from Environmental Working Group and try to at least avoid those.

They're the most top sprayed. For example, they'll peppers of strawberries. Some of these things that celery and those at the very least make sure you're buying organic and then do what you can to support your local farmers.

Go to the farmer's markets, get it fresh grown if possible. Maybe grow some herbs on your balcony if that's all you have. Whatever you can do to incorporate clean foods into your diet.

And I say that foundation because that's where it starts now with me with mold. It took me about 18 months to really start to see the difference. And the one thing I most want to talk about here was I got worse before I got better, and I think people need to be prepared for that because it's when your bucket is totally over your head, you're drowning in water and all of a sudden you start to mobilize toxins and move them.

That mobilization of toxins out of your tissues that's been accumulating into your bloodstream, where the liver and the kidneys can start to filter, causes reactions because you're actually getting them mobilized into your blood so your body can filter them.

And if you mobilize too fast, for example, you do 45 minutes a day at 140 degrees in the sauna. You're going to feel horrendous. You're going to get like, I got rashes and hives and you can't mobilize quicker than you can excrete.

So it's really important that if you feel like you're getting worse, it doesn't mean something's wrong. It doesn't mean you have to. It's harder. Right.

It's like kind of read, reassess, pause, reassess. And I'm sure I look at your patients where you shouldn't feel worse. If you feel worse, you know, significantly worse.

It just means there needs to be an adjustment to the plan, right. Exactly. Yeah. And I'm sure you're checking in with patients too, because if they're like like, I'll tell you my example.

So I was like, oh, I'm gonna get this. You know, it's hard. It's like I do with everything, which is to my detriment sometimes. So I threw like for charcoal twice a day, like huge doses of binders and some prescription binders.

And, and I started in hives and from my neck down my quads, my whole body was covered with rashes and hives and and the skin is a detox organ. Right. So everybody's trying to enlist the skin to help, right?

I was so and I was so sick from that. Like looking back at like my you should have been more gentle. But that's how we learn, like you and I both of have done the things that kind of made sense at the time.

And our bodies are like, oh. And we didn't know is the piece that, again, many mold sensitive I talked about in my book, but it's, the highly sensitive thing.

Right? A lot of our patients and both you and I, it's this gift we always thought, at least for me, I thought it was a curse. Like, why am I so sensitive? Environmentally, emotionally?

Everything, when it turns out, is those of us who are highly sensitive. It's actually a gift because we see details that other people miss, and we're able to sit with a patient and maybe come up with solutions that other people would miss.

But on the other side, as far as environmental toxins, mold exposure chemicals, you and I and probably half of our patient population and many of the listeners of the summit here, you are the sensitive person.

You're the canary. And it feels like maybe a curse. There's beauty there. But when you're dealing with detox, when you're dealing with mold, you're going to be more sensitive.

You might have to go more slowly. And what I really encourage you to do, which I didn't do, is listen to your body. Like if I were just listen. My body is like screaming out, this is way too much.

And I was just ignoring it and pushing through, right? I think it's really a blessing because our bodies are telling us they're informing us how to, you know, it might be a really narrow path, but it's really helping us to find that narrow path.

Whereas some people that don't have the sensitivities might be off the path that they don't. Their body is not able to let them know over. So I think it's actually really good.

I agree. And just at that conference that we were at recently wake up, I oh, my symptoms were started screaming at me with the in 24 hours of being in this hotel.

And I'm like, okay, I need to go home and sometimes I remember we're walking together, right? I remember I told you someone had told me a friend of ours that also detects mold, and she said the certain area of the hotel is really bad.

Be careful. And we were walking towards that. And you look down, you see, look at my hands. Right? You were like actually showing me physical, like, wow, I hope it's okay for me to share.

But like and I was having same thing like some of my symptoms. It was literally as we're walking down the hall, we were seeing symptoms manifest right before our eyes of the exposure.

And so it's the blessing is that rather than just sitting there and letting the barrel fill up, our bodies were like, and we were able to not spend time in that part of the meeting.

And for me, it was just, you know, go home early. Yeah. And I'll tell you, you know, I had my liver enzymes raise after that. And it was great. Yeah, I literally had I looked at lactate labs every 3 or 4 weeks and my liver was up into like one gel mold.

Yeah. So it was I had objective data of that exposure just like you. Okay. Yeah. I want to come back to this resilience because I think let's go. Let's go back to your story of, you know, what you felt like the things were that really helped you.

But even we just have to keep building resilience. And so I want to come back to I love that because that's really where we'll come back to that. And I'll just put a little teaser here.

The key is any of you who either are just now getting into mold, you're like, why does this is so overwhelming? Maybe someone's right in the midst of detoxing.

Like, I don't feel, well, this is so hard. Maybe someone's just at the end, like starting to get better. Or maybe it's like you and I in which we've been through a lot and I'm functioning fairly well.

## Mobilization, Excretion, and Gentle Detox Support

One of the keys that we want to leave you with is how do you get to the place where you might always be sensitive to mold? And and I still we could tell anywhere we go, there's mold. We know it.

We're like mold dogs. But what I know now is I don't have fear around it. I can go in there, and I know exactly what to do. I know what my threshold is.

I know when I need to go home if it's going to be too much. And I know, listen to my body and let it be the guide. And then I also know which we can talk about.

Next is what do you do with exposure to actually reduce that bucket level. So that for me, I can usually within 24 hours or less turn myself around and feel back to normal.

I didn't used to have that ability, so now I'm very confident in the fact that yes, I will feel mold. I'll be sensitive to more, but it's not going to take me out for months.

Exactly. And that's resilience, right? That is resilience that we can be faced with something pretty significant and bounce right back rather than get I'm getting taken out.

So what did we do? Well, for me, interestingly, when you have a lot of oxidative stress or something called Inos that gets upregulated, the NOx enzyme when there's glyphosate, mold, metals, gluten and any other toxin you could imagine.

And when this gets up regulated, you take all the good things like Nadp pH that makes your NAD, which helps you restore and recover. And you take all these things become oxidized.

And this oxidation is almost like if you were, rusting inside your body. So like a car that gets oxidized, it literally starts to rust. That same kind of process called the Fenton reaction happens in our bodies.

And it's just this reactive oxygen. So what happens is if we start to take things that are oxidized and need recycling, like too much NAD or glutathione, these are all wonderful antioxidants and they're powerhouses for many people.

But we put them in the midst of a body that is full of oxidative stress. They'll actually oxidize and do more harm than good. Same as like even hyperbaric. That's extra oxygen.

It's amazing for so many people, but it does create oxidative stress. Is someone's already super oxidized. So all these beautiful, wonderful things, if you're like, I don't tolerate them.

Part of the reason might be this was for me in the beginning I was so oxidized and so reactive, making reactive oxygen, all of these things made me worse.

Even glutathione. It was two years before I could take a dose of good with them. I would get worse and it didn't matter which form of glutathione you tried any type.

Now I can take it all day long as I'm not as sick and oxidize. But I mention that because we have these formulas and with these things, you and I both do them and they're perfectly appropriate.

Glutathione for everybody, binders for everybody. But there's never one size fits all. And I know you're like, individually treating, but I'm really respectful of these people.

Like I can't tolerate that because that gives me a clue. And if you're out there listening like, yeah, everybody I listen to you says, take glutathione.

But I feel worse with it. Listen to your body because there might be some oxidative stress that's actually you're

you're not able to you're reducing it or oxidizing it and you're not able to reduce it.

And so then you're creating more inflammatory mediators. Right. What happened to you when you were taking the glutathione? I would feel it. I would just feel worse. I'd feel more tired, more foggy.

So normally people kind of feel like they wake up. In fact, right before you had a patient in the office, a young man who had some old exposure, and I gave him a sample, good of them to try.

And he's kind of come in kind of grumpy, kind of irritable, kind of like soon as he took this, he's like, it's the liquid stuff, right? And he just like, right before my eyes move it up.

And he's like, mom, I feel so much better. I saw him like a light bulb turn on. It's fun. Okay. That's awesome. This is going to totally work for you because I witnessed it and that's how it should be.

You should literally like, oh, my brain just turned on. I feel better, more energy because good at them helps you mobilize and get rid of these toxins.

And it works for the whole bucket. That's a great thing. Google is a vast antioxidant, so it works with almost every pathway. The other caveat there is I would say your liver gallbladder.

We talk a lot about that. But if your kidneys aren't working, if your skin or so, all these other organs need to work. And bile is huge in this process.

So basically, the liver takes the nasty mycotoxins and converts them into form of lipophilic. A fat soluble substance is stuck in your tissues into a water soluble substance.

So it can be excreted and it gets excreted through bile. But many people, number one, don't produce enough bile, and symptoms of that would be trouble with fatty foods, maybe indigestion, maybe like diarrhea with fatty foods, maybe Sibo or CFO, small intestinal, fungal or bacterial overgrowth because there are signs of not a clean small bowel.

And I could name a dozen others, but mold would make your bile kind of sticky. And so often colleagues, which are like bitters, can be really helpful for making that bile flow better.

We actually use bile acid binders by prescription, like well called coaster. I mean, in some people, because we're pulling that bile out and things like taurine and glycine, which are precursors to bile.

If someone can't tolerate binders, what we can do is start with that bile support, like with glycine Ataris, and just give them those nursing and usually people don't react.

You certainly could do anything, but those are very simple and safe ways to get someone started to flow. If they're not tolerating the glutathione of the binders.

Beautiful. And what do you like to do for kidney support? Kidney. There's a product called Renton. It's a herbal. It's a that's really great. And then there's the German homeopathic kuchen and drainage remedies may have, relics, and I tires for the limp and then have pets for the liver because they're kind of like a trio.

I've learned all these tips from my naturopathy friends because they're so good at these more exotic, So interesting. Okay. And then hydration, of course. Right.

A clean water. Yes. And you wanna talk about that really quickly because mold does this really weird things. It does a lot of really bad things. Like it trashes your detox, which is making them all worse.

One thing it does is it creates this process where you aren't regulating your volume. So typically 88 will go down. That's your regulatory vasopressin for regulation of volume.

And so you're drinking your pee and you're drinking you pee. And you can't keep volume in your vascular system. You might get dizzy or lightheaded when you stand up.

You might be dehydrated chronically with dry skin, and your body can't maintain volume. And this is where if the kidneys get too dry, they don't do so well.

It's like running up a car without any oil in the engine, and you burn up the motor. If you don't have enough hydration, your kidneys just don't like it.

So part of this kidney support is actually just hydration with electrolytes, which usually really helps because the idiot isn't able to control that. And if you add a little bit of salt to your water or electrolytes, you'll be able to maintain that volume better and support your kidneys.

Beautiful. So those are probably just good basics for just about anybody. And then and then you like to layer on the other binders and go to town and, and that kind of thing.

So anything that makes glutathione and again we talked about if you don't tolerate taurine and glycine are great for bile, but you can also use precursor glutathione.

That would be like NK lipoic acid, milk thistle, selenium and all support that liver. And then I'm sure you like, fosters little choline. That's my desert island other than glutathione and stuff.

Just like if I can only have a couple things on a desert island. The positive recalling. Would you like to explain why a PC is the piece of all of our membranes are cell signaling, our neurotransmitters are cellular membranes, and they're especially important in the mitochondria.

Mitochondria are the energy powerhouses of each cell. And often when we get these toxins, including mold, all the membranes get damaged. We have leaky brain, leaky gut, leaky mitochondria, and leaky tissues.

And when those membranes and phospholipids are damaged, you can replace them with the healthy phospholipid, which is PC or busted or choline. You can do that orally.

You can do I've. The one caution about orally is if you have a really damaged gut and lots of just feces, like bacteria and fungus and junk in your gut.

PC by nature takes things across barriers. It's like a boat. And so if you put PC in before your gut is in a decently healthy state, you could transfer some of the bad guys in your gut into your bloodstream.

## Trauma, Limbic System, and Mold Resilience

So I always wait to make sure the gut's in a decent spot and not super permeable. And then you can do oral PC, but you can always bypass and I'm sure.

Do you do IVC? I do, I love it. I think that personally for the sickest patients that it seems to give them, a lifeboat to get better quicker. How about you?

Yes, yes. I don't do it in my office, but I refer people because I feel like you do. It's such a powerhouse. It's one of the most. There's some a German researcher who shared with Eisai before.

I can't remember his name. So forgive me for, But he talks about DNA addicts, basically. They'll test in Germany what kinds of chemicals are affecting your DNA.

And really, they test for mold and aspergillus and chemicals and metals and all this stuff that's filling our bucket. But ultimately, the solution for all of this PC makes a huge difference.

It's so fun to do that before and after on that test, Nigel. Test and and see what a miraculous improvement. And so my question quickly. And you can do it without the IVs but it's just it just takes longer.

Yeah. It's just a really quick mechanism, you know. Are there any other of your favorites that you want to add to cover before we move into resilience?

Let's see I guess okay. Let's talk about so we talked about I think about mold with mobilization and excretion. And we do briefly touched on that. We talked about all these ways to mobilize liver kidneys all that great stuff.

But if you mobilize too quickly and you aren't excreting, you get sick like I do. You get hives. So the excretion part, I think is a little bit more subtle and not as commonly talked about.

And this would be dry brushing, stimulating lymphatic, lymphatic drainage and even lymphatic, essential oils and things, Epsom salt baths, infrared sauna, and any sort of a lot of times are manual therapies.

A lot of times they're more subtle, more gentle. But you want to really think about how and binders can help with excretion, too. But if you are getting sick or not doing well, you usually pull back on the mobilization and you increase the excretion.

And again, sweating can help, the fatigue drain into anything that would help. Lymphatic drainage would help anything where you're actually excreting and allowing your body to catch up is really crucial.

Yeah, I think the lymphatic piece is just one of those that's overlooked so often and just so important because it's just such an important way to actually get the toxins moving out of the tissues.

So thank you for really emphasizing that. Yeah. And I'll just mention because you and I both conventionally trained with this great education, but there's little pieces that we're lacking.

We didn't get a ton of nutritional training. Know you and I've done a sentence and so you're an expert. But we I'm you. But yeah. And it's so fun, right.

Because we can just there's always something more to learn about. Okay. Right. As I mentioned, lymphatics. I mean, it was mentioned in passing, but I don't remember much at all about like, I was like, what are the number kind of seeing a diagram. Right.

And the other system like how it like kind of rise along the same passageways. But you know, in anatomy you don't really even look for the system or the fascia.

Yes, yes. And those two are so critical. And I mentioned that because if you're going to a conventional doctor, maybe even someone who knows mold, be kind because they probably don't know a lot about lymphatics, they'll get.

And you and I have learned and we use this in our practices. But it's one of the things that conventional medicine is not very up on understanding most of my information about true lymphatic drainage, I forgot castor oil PACs.

That's another. Really? Yeah. Right. That I've learned from my natural Catholic friends. Beautiful. All right. So okay, let's keep let's keep pumping resilience because I, I, I know trauma is one of the things that really has piqued your interest.

You know, it's an amazing job of addressing that in your book. And I know it's near and dear to your heart. So I want to make sure we have some time to talk about the role of trauma and mold.

So this was something I knew intuitively and saw patients over and over. And then as I did the research, it just confirmed. And I'm not the only one out.

There's a lot of other people talking about it, but we'll talk about it today and how it connects. So first of all, so far, I will say clinically 100% of patients who I treated for mold related illness, which is a lot of people, have some form of trauma.

And what happens is even if they've done all their work, they have a therapist, they have great relationships, supportive environment, and they're really healthy in that way.

There is a traumatic component of the PTSD component of mold. And like I said, I say 100% because I've never seen this not be true, including myself, where there's some PTSD component of mold.

So as I'm writing my book, I was researching and trying to figure out like, what is this? And, you know, and it's actually in the research published about how chemicals literally in our olfactory system as we inhale chemicals, internals nose the crew perform plate, which is this like porous plate into the HPA axis in our brain.

There's literally evidence for the chemical trigger of noxious smells and mold into our brain, triggering the amygdala and the, trauma fight or flight response.

So it's not just that we're afraid of that exposure and getting sick again. All of that can be very real for people. It's literally that inhalation gets triggered with the amygdala response in our brain, a fight or flight response.

And it kind of makes sense, you know, from a survival mechanism, if there is a noxious something happening, our bodies need to instinctually get away from it.

Right. But yes, problem is with like I think from a survival mechanism, you know, hunter gatherer times like it's a quick exposure. Whereas with the mold it's so long term.

So it really gets that. And they deliver poisoned at the same time. Right. Yes, yes. And so when I understood this like oh no wonder. Because again, yeah, we all have a little bit of trauma we can deal with and work with.

And if we're, you know, where in a week we can get those kinds of things and we'll talk about some resilient strategies there. But the truth is, even if you're healthy and well-adjusted and great relationships, it's still traumatic to have the most exposure and especially if you get sick from it.

So what I do with the treatment is I always involve limbic, you know, loop training. I think you were the one who said Olympic loop or whatever words we use for that is this amygdala response.

And how do we basically neutralize that as part of the protocol? Because what happens is when you first get exposed to mold, and there's actually some mechanisms that create more.

I avoid all the dead. In the book it talked about antisocial behavior. If I look back at right after my mold, I mean, all I could do was go to work, go home, sleep, and like, I could barely function to get through that really sick time.

I wasn't using that. You were able to keep going. It kind of is to me. I'm like, how did I do that? Because I was really, really sick. And the thing about it, too, I really pulled in, almost like anything like lights sound too much stimulation was all too much for my nervous system at the time of healing.

And so I wasn't going out to dinner with friends. I wasn't traveling that much. All the extra stuff was like, I can't deal with that. Let me just so there's an and I've seen this, especially with keto meum, there's a center overwhelm that comes from the mycotoxins exposure that adds to the burden of the illness in the sense of everything feels overwhelming.

And it could be, I don't know the exact mechanism I suspected part of. Literally your brain circuits are like can do with us. I like to share this new study with you that I found on to tell me.

And they looked at like hundreds of different chemicals that are made by to tell me and like it went up like all the

different functions that they did.

So I will probably figure out the answer to the question, why, if we look at this together, you know, wait, because I know I saw it and then I felt it.

And even last summer, a neighbor's fridge leaked. It went under my condo floor. I didn't know it was can tell me my condo, and I felt like I was almost going to have like, a nervous breakdown.

And I'm not that kind of person. I'm not usually anxious. I'm pretty happy, very optimistic. And it's like, what is wrong with I'm good, tell me them.

And I was like, oh, no wonder that darn good tone, you know, because whenever I've had exposure to ketamine, I had a sense of like, my brain is not crossing wires properly and I'm feeling overwhelmed.

And even depression, anxiety, that's not me. But certain molds will cause very bizarre. Like down, sad, overwhelmed. So I just want to say that because if you experience mold and you're like, wow, I'm so depressed, or I mean, even suicidality of these like, that is so important.

Yeah. Any time somebody becomes suicidal, we really have to look for more. Yes. And I just I have such compassion for you because even for me, who I haven't had those kinds of disorders in the past, but when I've had mold like, oh, this must be what it's like to be depressed, you know, or whatever those things are.

And what I find it also does is it sabotages our insight to our insight is our ability to, in real time, tell that there is something wrong here. And we might kind of know, but even to this day, it sometimes takes me a few hours or at least 30 to 60 minutes to realize, oh, this is mold.

And it's because that mold sabotages that quick insight ability that I would normally have without mold like, oh, this is what's wrong. I need to fix this.

It's almost like this kind of vague sense of like, whoa, what is going on? And then location. Yes, that's a perfect word. So overwhelm, common disorientation, common depression, anxiety common because it is so common in that situation too.

Yeah. So if you're experiencing these things these are very real and they're very treatable. And the great news is I look back and I'm like, I wonder how much of suicide, bipolar, depression, anxiety, I wonder.

There's got to be a decent percentage that's related to mold. Absolutely. Especially since we have this epidemic going on. So many buildings have pretty significant mold and I'm.

Yeah. So resilience. How do we deal with this? First of all, I always want to teach patients to connect with symptoms with with the real time exposure in the sense of the more I can empower patient to know, just like you and I in the hotel, we both have a very clear like this is what mold feels like to me.

## Mast Cell Activation and Related Symptoms

I'll feel pressure, my sinuses, I'll feel a little disoriented and confused and maybe some overwhelm. Like we said, often more tired or foggy. As soon as I wake up the next day, I'm really achy.

I was so achy at that conference, like I just felt like my body had been run over by a truck. Yeah, like, whoa, what is going on? Uploaded. Just like I normally don't.

I mean, like, what's uploading? And so for you as a patient, what you want to do is find what your signature for. This is part of resilience. Because if you can identify and the difficulty is if we look at molds and mycotoxins, there's hundreds of chemicals produced.

So even for me, I have personalities of more than I can almost tell now which mold I'm exposed to by the system. So yeah. So you probably I'm like, okay, tell me and whatever, you know, the overwhelm with can tell me and where the stack is like dark sadness and so these things and that's just for me.

But if you can find a signature for you over time of what it feels like to be exposed, mold, what you can do with that is that gives you resilience because it's like an and I, we walk through this hotel like mold mold alert and we know okay, I go back to my hotel room, I take glutathione, I take binders if I can sauna, Epsom salt baths anywhere in the hotel.

I do that, if I can get fresh air outside, open my windows, and then if I can go home as soon as possible. That's also good, right? So change rooms if it's in my rooms, in hallways, but if it's in a hotel room, you change your room.

So if you as a patient can I times would you say you've changed hotel rooms. Many, many. Yeah. And you know, that's talking about because so many of us, especially women, we've been taught to be conscientious, be kind, be accommodating.

You have to be very freaking bold about what you need. And there's nothing wrong with that. I always say it's okay to be high maintenance if you're high performance.

And I don't apologize any more for my two bags for the weekend or for my need to change room, because it's about your health. So I want to give you permission.

If you're listening, be high behind minutes and high performance. If you need to be asked for a new room, ask for accommodations. Ask for a windows at open.

Ask for a fridge in your room so you can have good clean food. Whatever you need. It's appropriate and it's okay to ask for it, but that it's so important.

And I do think that that's been one of the gifts of, you know, when we look back at these illnesses and like, what are the silver linings? That is one of the gifts, right, is being able to ask in certain situations for for what you really do need.

It is and that's where it can be a gift to like, empower us and realize that. And then you also realize, like before, when you first get into mold, it's you get so sick and it's so scary.

But as you work with this trauma. So back to that trauma piece. Every single more patient I tell limbic deactivation symptom a syndrome. Sorry, I can't talk limbic deactivation, types of solutions.

And those could be anything from DNR s brain tap, Gupta protocol, cranial sacral therapy, neuro linguistic programing, working with a somatic based therapist.

And the more you understand about the somatic system amygdala and how it, correlates is is going to help you. So I recommend reading people like Peter Levine Gabor Mattei.

The latest book on Cobra match is phenomenal. Oprah just wrote a book on, why did this happen to me? And it's all about childhood trauma. It's so good.

So all of you can say, now that's a good recommendation. Really good. Yeah. So all of these definitely expect someone like Oprah to have. Right? Right.

She shares openly. And it's such a great like primer. The more you understand the more then you can start to see, oh, I have this pattern and you have the power to change that.

None of this is permanent. That's beautiful. Yeah, I think about as you know, we get entrenched in these neural pathways. It's just kind of the way we've done things.

It's how we've survived. It's what we've done. And so if we can see where that we're in the trench, then we can jump ourselves out of it and make a new pathway.

Yeah, yeah. So the great thing about neuroplasticity is we have the potential to reverse it. That's what it means. As we used to think, our brains were just going to be that way.

And we're going to age and we're going to lose our memory. All these symbols are gonna be permanent. But the truth is, all of this we're talking about has the potential to be reversed. Beautiful.

I'd love to spend a couple minutes on, on Marcus, because I know that that's been an important part of your journey. Yeah. So what we know is some of the great leaders, Lawrence of Afrin and, Theo theories have been great teachers of message activation, and they're conventionally trained.

So they weren't, like, trained in the mold related illness. But both of them speaking to them have said over and over, mold is definitely the biggest trigger of mast cell activation.

And if you've never heard that term, it's very, very common in especially post-Covid, because what happens is our mast cells are promoting memorial cells to protect us from the environment.

So they're kind of out there scavenging and looking for things that might be harmful to us. And what's happened is as our buckets have loaded up and our environmental toxic load has increased, they have become more and more reactive.

So we're seeing many more patients that have muscle activation just because they're being triggered. And mast cells particularly don't like mold. So that's a very, very common thing for them to be triggered by mold.

And then they'll throw out their contents, which include prostaglandins, histamines and a thousand other things. They create inflammation, swelling of tissues, permeability of tissues and overall dysfunction increase heart rate, decreased blood pressure.

And I could go on and on. So typically people will present with brain fog, rashes, hives, itching, activation of old infections, gut permeability issues, all of a sudden increased sensitivity of foods, racing heart rate, pot symptoms which could be as they stand up, they get dizzy, lightheaded, this adenoma where they're just autonomic nervous and their blood pressure, their heart rate. Nothing's working right.

And some people are so sick that they're in bed they can't even get up and go anywhere because they're so just autonomic, which means they can't regulate pressure when they stand up and they get really, really exhausted.

In the worst of it, for me, I would run blood pressures as low as 75 over 45. Oh my gosh. So how did you function? Right I know well you know, it's funny, this little funny thing about could tell me and I can always call it the narcoleptic mode, because if I would get exposed, I'm like, I got to go lay down now.

I'm so tired. Well, I realized it was dropping my blood pressure and I wonder lay down cause I couldn't keep standing up. You had nowhere to go already.

So if you went lower, you can't. You can't. Yeah. No, my normal is 90 over 60. But if I get below that, then I started to be dizzy or lightheaded. So yeah, that's a whole nother lecture on nitric oxide and basic evasion pathway.

But the bottom line is, a lot of these muscle activations will create many, many very severe symptoms. And if you think about like where to start, if you're sick with mold, you kind of have to think about limbic system right away and start to get in and at least create.

So there's kind of a fear around it. And then you do have to address Marcel right at the top, because often these patients can't tolerate herbs or supplements or binders or things until you stabilize themselves.

So what do you do? Well, natural muscle stabilizers are things like quercetin, luteal and and nettles. Chinese skullcap so often use combinations of natural things.

And then with these patients I find they often need a layered multidrug approach for hitting all the pathways. So H1 blockers, H2 blockers, mast cell stabilizers and some of the common ones are, you know, the allergy medicines like zero tech, Allegra, Claritin, Benadryl, XYZ, all, all of those.

And then maybe adding something like Renata Dean for the H2 blocker and then muscle stabilizers, things like Monta, leukocyte or Ca2+ often are powerful chromium Cromwell and can help with food sensitivities.

Doc enzyme can also help break down histamine. Adding methylation support can help break down histamine. So you're kind of going at it as breaking down the histamine blocking.

This means stabilizing the mast cells helping Dao enzyme which will break down histamine lowest mean diet. And you kind of often need all of that. Yeah.

To stay up to especially when people are as sick as what you described with, you know, hardly getting out of bed if you just hit 1 or 2 mechanisms, it's not enough.

Now, I want to say a few that you may not have heard. I'm sure you have, but the listeners may not have heard before. Stimulants, have their place, and stimulants are off label when used for pot, so sometimes they'll use stimulants if someone has severe pots because that that's actually a pressor.

So something that will increase epinephrine norepinephrine and raise the blood pressure in severe cases. Methylene blue I've been a huge fan of this. And it probably because it's been around for 200 years.

We've used it for Bartonella and infections, but it actually can actually create some issues with the nitric oxide. So people are more stable with the Pots as well.

So there are two little things that can be helpful for certain patients. Beautiful okay.

## Book, Documentary, and Closing Resources

So I would love to talk a little bit about your book because I think it's such a gift to the patients to really do a lot of what we're what we're all about, which is to create inspiration and hope of of recovering from these illnesses.

So I'd love if you just share a little bit about your book. I have it here, I loved it, it's so awesome. Thank you. Well, it's it's really different from a lot of them out there, only in the sense of I was told that you can't write your story unless you're Oprah Winfrey or Brené Brown or someone really famous.

But in my heart, I was following my intuition because I thought stories are connective tissue. And even as we tell story here today, and I'm sure a lot of your guest story is what people relate to, because you can present all the facts in the world.

But when you have a real person, a real journey, and actually all of a sudden we're like, oh, I'm not alone. And part of our place in this world is to really realize we're all one and we're not alone.

And even here today, I hope if there's one thing you take away, it's that there's hope. And that we are here, right there with you. You're not alone in the suffering.

And when I realized is my path as a healer happened involve a lot of stuff, a friend, a lot of illness. And the power of the suffering comes in understanding the purpose and meaning and then retelling your story so that other people can relate.

So what I did in the book is I wrote my story and I shared a lot of very personal, vulnerable points of struggling with

being enough, working too hard in my addiction to work as an addiction like any other.

How do I deal with that? How do I deal with when you be strong and resourceful, but also feeling sensitive and weak on the inside? How do you deal with picking really unhealthy relationships?

And I share some of the elements very telling. You're so brave to share. Almost. Like I really, really admire your, you know, the amount of compassion that comes through and, and just the integrity and intimacy of sharing your journey.

So I think the hope is just that a reader might see parts of themselves and be encouraged. And then the great part is there's sidebars, tons of them I mold.

It's actually. So it's actually there's a practical piece too, if you want just you just want to read the sidebars and not my story. That's okay too. And you'll just get the how to for how to detect mold, what to do if you're more exposed to the whole chapter called Transforming Toxicity, all about how I recovered from mold related illness, that's really well done.

I think it's it's I highly recommend to read. And and I think people will walk away with some really good tools and understanding and inspiration for sure.

And then your documentary, I loved getting to see that because, you know, I got to see where you grew up and where you went to med school and where you dealt with cancer and, you know, really made your story so real and so personable.

So if you could just share a little bit about the documentary, to be sure. So that was another unexpected miracle. But we have a documentary now. It's in the film festivals and it will be distributed right now.

We're waiting to see how that will happen. If you want to just see the trailer and just find out where it might be playing a doctor patient movie.com is the website and the trailers on there, so you can see that, and I'm sure we'll be putting out there to the world when it's coming out.

And right now it's just in the in the film festivals. It's really beautiful. Thank you, thank you. Anything else before we share where to find you and all your good amazing information that can keep people moving and inspired.

Thank you. And we'll just as always, it's such a pleasure to be here with you. And if you guys don't know, the amazing powerhouse and to be is in the world, I love you so much.

So thank you for what you do. Thank you for having me today. And if there's any message which I want to leave with you is, this stuff can feel totally overwhelming in the mold more than anything else.

It because it sabotages your brain. That's why I wanted to talk about that, because in the midst of it, it may feel hopeless. It may feel like you'll never get out of it.

But there's hope and there is reversal, and there is resilience. And so no matter where you are in your journey or where your friends or family are, and you might be listening for them, there is always hope.

And I just want to encourage you don't give up. No matter how dark the times seem. Always grasp for that light and for that answer and for that wisdom, for that hope.

Because there is always a chance to turn things around. Yeah. No matter how how dark things seem, there is a light of the end of the tunnel for sure. So thank you for that.

And you do such an I love your blogs, so I really recommend people get on your website and read the blog. So you're just constantly putting out great information on your website.

So if you want to share your website and then Instagram, sure. Thank. And it's just my name. So jillcarnahan.com and it's all free there. So yeah, lots of resources for mold especially.

I write a lot about mold. And then Instagram is just Doctor Jill Carnahan. Awesome. Well, thank you so much Jill. This was just a great we covered so much information and lots of great tips and tools for people, and I think really covered a lot of the most important information for people to know what they need to know to really make progress in and getting better and becoming resilient.

Yes. Thank you. And as always, it's a joy to talk to you. All right. Thank you so much, Jill. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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