Is Mold Making You Sick? The Overlooked Trigger Behind PANS/PANDAS Transcript

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Podcast Introduction and Guest Welcome

Your top four are more top four. Yeah. Weed killer mold. Emfs Mercury. And Mercury is a big problem. Big, big problem. You know, the idea that we're still.

It's it's a proven neurotoxin. And there's still an accepted dental practice to put that directly into a child's mouth. That is like right here where it can cross into the brain.

And then, you know, the longer it sits there, the more it off gases into a form of mercury that can cross the blood brain barrier very easily. So yeah, mercury is on the list.

Welcome to Doctor Talks, the podcast, where every episode leads to a healthier you. Join us as we navigate the world of optimal health, uncovering groundbreaking strategies to conquer chronic disease.

In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors. If you are seeking to transform your health journey, or if you're looking for answers to burning questions, you've come to the right place.

Get ready to unlock the secrets of lifelong health and vitality. This is Doctor Talks, real talk from real doctors on the issues that matter to you most.

Hi everybody. It's Doctor Nancy O'Hara and I am absolutely thrilled to welcome Doctor Jill Krista to the podcast. She is a pioneering naturopathic doctor, a bestselling author, devoted educator, creative innovator.

The the adjectives and and compliments could go on and on. But I do agree with her that her superpower is making complex medical concepts simple and digestible for the average person.

I think that is a really relatable and important gift. So it is a superpower, and Jill's passion is to elevate the well being of the planet by assisting in healing all of her inhabitants, and she focuses on conditions that cause injury to the brain, as I do, and to the nervous system, including mold of which she is an international expert.

Pans pandas also an expert Lyme disease, concussion post-Covid syndromes. Her books, her products, her online courses support those wanting concrete steps to conquer these health challenges.

And Jill, you know, as as I said to Scott Antoine the other day, you know, sometimes I feel like, you know, we're sisters from another mother because when I see you saying something or I've watched other podcasts of like, oh, yeah, I dove right on that, I so agree.

And yeah, I love what you do and so appreciate you being here.

Jill Krista's Background and Mold Journey

Likewise. This is a real treat. It's a real treat. Thank you. So you've written two great books Break the Mold A light in the dark. Both are great Townsend letters.

Natural medicine journal articles, alternative therapy, health medicine. One that I didn't know was the anti-fungal therapy in water damaged. It was a study of mold mediators, which I found fascinating.

I love that article. Do you know what I'm talking about? Yeah. Yeah yeah yeah. Yep. And then using antifungals, you know, I, I take some heat for that.

So I wanted to write up a case of where we did all the normal stuff, you know, for this guy. And it wasn't until we added antifungals and then antifungals also in his nose that it was just like, boom, there was the that was the missing piece.

And and he was my first case that I was like, I might be thinking of this not quite the right way, and started adding more intranasal to my protocols.

And people got better so much faster. And I was like, okay, I've been missing something. So yeah, yeah, yeah, I wrote it up because it was it was great.

Thank you. Yeah. And for anybody that's looking for it, it's an alternative. There. Politics in health medicine. Am I saying that right? Yeah, I think so. Yeah. It's link.

It's linked on my website I have submit. Yeah absolutely. So peer review and and how did you, how did you get to where you are today. Can you tell me a little bit about your story.

Yeah. The the mold story is I moved to Wisconsin and, you know, came out an ethics school ready for environmental medicine. You know, I was trained in that.

I was trained in food dyes and food allergies, all of the things. So I found myself in a lead toxic area because there are lead mines not far away. And that this is I'm trained in this.

No, no biggie, you know. So I'm going to help these people with their high blood pressure and osteoporosis from lead and blah blah. Did the therapies some people got completely better, some people didn't.

The people that didn't ended up having Lyme disease, and that was a big eye opener for me again, was, oh, this is more than a joint problem. Yeah. And so I went to I labs got trained in that.

And when you apply the principles that we do my sister in treatment find and treat the course and people get better. But then there is a section that didn't get better.

And in one of those patients they found toxic black mold when they were meeting or they were remodeling and they found the mold there. And then it was like, I wonder if the mold could have could be behind why he's not progressing on the Lyme treatment.

It has got to mass. His ear ringing is pelvic pain is joints are breaking all the time. You know, just all of these things that I was like, I wonder if this is related.

And so I hit PubMed like I do and went, oh my goodness, I've been missing mold all over the place. And so that was my big, you know, eye opener and just started applying what I was learning in the animal research because we don't have human research.

And there's a really good reason for that. You know, mold mycotoxins are known carcinogens. So we can't recruit patients to a study to say, hey, we're going to poison you with something that could make you have cancer, but we don't know.

And then we're going to put some of you in a treatment group where we don't treat you, and then we're going to put some of you on a train. It's we can't we can't do it right, but says, nope, thank goodness.

Exactly. Yeah. And so when I was looking at the animal research, a lot of what they were using, I was very familiar with because it was basically natural medicine.

And so I just started applying it and people started getting better. And I thought, well, I'm going to start sharing this, you know, and teaching it with other doctors.

And then I found I all through this time I've been a mom of twins with pans. And when I was sitting in a Lyme lecture with Charles Ray Jones on pediatric Lyme, and he had a slide on congenital and I was like, oh boy, that would really stink, you know, if that ever happened to somebody.

Kids. And then, lo and behold. Yeah. And so then I'm looking at the symptoms and I'm going, oh, I wonder if my kids have Lyme, bring them to Doctor Jones.

And he looks at me after the appointment, he said, so how are you doing with your Lyme? And I said, well, I don't have Lyme. I have fibromyalgia. You know, even though I'm doing the training, it just is not sinking in.

He said, your kids have congenital Lyme by my records. And I was like, oh, wow, okay. And then finding out that there was mold in that story as well. I was exposed to mold when I was pregnant with them. Massive.

And so it was just kind of like all of these things kind of came together into one, one picture. And I'm finding, I know we've talked about this. It's so common to see all of these things together, you know.

Absolutely. And it spans Lyme mold, environmental, you know, the whole thing. So yeah. Yeah. And as you and I both say, you know, it's not about the specific germ.

I mean when, when somebody's listening may say, well, my kid has pandas. It's not mold. No. It your child has an immune intolerance. They they have inflammation that's causing these neuropsychiatric symptoms.

But it's not to that specific germ. And and so many of the kids, if not all of them I feel in the northeast here are also affected by the toxins in their environment and and particularly affected by mold.

Yeah, mold.

PANS, Gut-Brain Connection, and Immune Regulation

And you know, I was I know we both also talk about like the pesticides and the weed killer and that kind of stuff. But it's just like, yeah, you go to some of these any neighborhood and you can start to just put all the pieces together of how we live right now, how we build our buildings.

We build them in the middle of a rainstorm, or we don't manage our older buildings. And, you know, it's just a lot, a lot setting the stage. Yeah. And and in Covid, all the, the supply problems with thing sitting in shipping containers forever.

Now a lot of the new builds I mean people are saying to me, well, I live in a new house, it can't be a problem. No, no, no. A lot of the particle board in new builds are worse than our older homes, right?

Right. Absolutely. It's it's so much more digested now, this wood that we're putting into buildings. And so it makes it really easy for mold because it's like, oh, I excel at this.

I'm really good at breaking down previously living organic material. Sign me up. You know, all I need is a little bit of humanity. Yeah, yeah. And and you know, I, I talk about the three pronged approach to pandas and, and I know you do, but you have such a great way of saying it.

I've heard you call it, you know, beat the bugs, tame the flame, guard the gates. Yeah. You know, I love those phrases because that brings it home to families that.

Oh, I can remember. Tame the flame. All right, that means. Okay, can you just describe that? A you know, any of those a little bit more? Yeah, sure. The idea is it's a core for I write in my book.

I could have made it a core ten, but having been that parent who's overwhelmed and I have to say kids, I would have thrown the book against the wall and said, forget about it, you know, ten too much.

So I discipline myself to nail it down to, you know, what are the things that really move the needle the most for the families that I work with? And taming the flame is number one.

So the core core one is Team the Flame core to beat the bugs. Core three regulate immunity because as you say, this is first and foremost an immune problem before it's a bug problem.

And then fourth is guard the gates, which means gates to our infections. So our our respiratory passages are throat a lot of kids, you know strep throat.

Our exposure to environmental toxicants like more like mercury like weedkiller like emfs. And then also our exposure you know, to. But the things that sometimes we can control and sometimes we can't.

So the emfs are classic. They're, you know, if you have a kid who's they need to homeschool for a while, they're going to get some biomass. So how do we mitigate it instead of be fearful of it.

Right. Yeah. Right. Absolutely. And I just think they're great ways of explaining things. And in your book you you have a whole chapter called Tummy Trouble, which is great.

And could you, you know, we all intuitively know this, but I think you explain it so well. Just expand a bit on the connection between the gut, the gut microbes, the immune system, the brain, all of that.

Yeah. Thank you. I love to talk about this and I love to explain it to kids, which is how it it has helped me bring these massively concept, you know, complex concepts down to like, how can I explain this to a kid, you know?

Yeah. So for those that don't know, we are outnumbered in our gut by our microbes on a cell, by cell count and a DNA account. So there's more of them and more of their DNA than there is of us.

And so they determine what our body considers us and not us. So in an autoimmune condition, the body gets confused between self and not self. Well, we understand what not self is.

That's germs, pathogens, that kind of thing. But it turns out because of their outnumbering us, what determines the self part is our tummy and our my microbes in our gut.

And so it turns out also that our gut tissue and our brain tissue come from the same embryonic cell. So when an embryo breaks up into its first three little parts, one of those parts is the brain gut.

And so they're like they're entangled and they they're they get each other. You know, so whenever something's happening in the stomach, the brain gets told in quantum leap fashion, it doesn't have to take chemical messengers and all this kind of stuff.

It's in meat. And just like the brain can affect the gut, like if you're really stressed out, you're not going to digest well. The gut affects immune reactivity in the brain.

And so the whole idea of tummy trouble is that if we can help correct what's going on in the stomach, in the microbes, that determines our immunity, but it also calms down what's going on in the brain.

Yeah, yeah. And I think it's so important I often will, you know, I'll have dads come in and they they're like, well it makes no sense. That's the gut. That's the brain. They're far apart. Doesn't work.

And I'm like, well, what happened the last time you had a six pack? You know, a beer. You know you can help bring it down to them. And sometimes in understanding that what we put into our gut does to affect our brain.

But you're right, it's so much more than just the, the neurotransmitters and the, the immune molecules and all of that. They come from the same cells in the embryo.

Yeah, absolutely. And even for tissues that don't like the lung tissue there, there are studies that show that the way that mold and mycotoxins affect the lungs.

And we have a microbiome in our lungs, too. A lot of people don't really think about that. It's like we have a we have a different microbiome for our gut, a different one for our lungs, for our sinuses, for our throat, for our ear.

You know, I mean, there's our skin. So there's a there's one in the lungs. And if those if that microbiome gets tweaked to having more bacterial type dysbiosis, that makes it something called an endotoxin that creates immune reactivity in the brain and leads toward autoimmune.

So this is our connection of mold to Pans is that if you're breathing things in and it's getting to your lungs, which is hopefully what your breath is doing, then it can cause this immune reactivity that tells the brain to start attacking itself.

So it may not even be strep, biomimicry or those kind of things. It's, you know, it's tough. So we can we can make major that's at the core. Three is regulate. Immunity is mostly the gut.

It's mostly things that we're trying to correct. The microbiome. Right. And I think so much in conventional medicine, allopathic medicine, we we put things on we we name it something.

Oh well you have pandas. Well let's tame it with an antibiotic and and then we'll blame everything on that. We're missing such a big piece when we do that.

And also maybe causing harm to to the gut itself with what we're doing right and confusing more I mean confusion then because then like, well, what is self.

I've, I've now have a big bomb that went off in my gut and I now have different species. So now who is self and who is not self. Yeah. Right. Right. And and as you said before it's a double whammy.

You know the the immune system is exposed to the infection or some trigger and the other is all the environmental toxins. So your top four are more tougher.

Yeah. Weed killer mold emfs mercury and mercury is a big problem. Big, big problem. You know, the idea that we're still it's it's a proven neurotoxin.

And there's still an accepted dental practice to put that directly into a child's mouth. That is like right here where it can cross into the brain. And then, you know, the longer it sits there, the more it off gases into a form of mercury that can cross the blood brain barrier very easily.

So, yeah, mercury is on the list. And then, you know, I have some dishonorable mentions like chemicals and vaccines and those kind of things. But but I wanted to keep to the top four that were really actionable, you know.

Yeah. Yeah. What about aluminum where that with that soon. Yeah. That's in the. Yeah. The toxic metal kind of like chemicals, toxic metals, vaccines that that whole are the next the next batch.

Yeah. Right. Right. There's a woman and especially with the mold combination, it's known that aluminum increases risk for childhood asthma. Right. So whether that is through you know we got it through our whether you know that whatever is being emitted into the environment or whether that was injected, you know, it's still can create that increase in asthma.

And there's a huge risk of asthma with mold. So that's just another double whammy. You know, it's a great example of the double whammy. And and the thing about mold, you know, you can have a whole family that's there.

Not everybody in the family may be susceptible, but you may have one child that has all the respiratory symptoms, the asthma and another child that has the neuropsychiatric symptoms.

But really they have more in common than they do separate. I'm so glad you said that, because a lot of people have this misunderstanding that if if it's mold, if it's a problem with our house, wouldn't we all have the same stuff?

And that's actually more the exception than the rule.

Environmental Triggers and the Top Four Toxins

The rule tends to be that everybody is a little bit different, and it has to do so many things. It has to do with genetics, but it also has to do with nutritional status.

So we see that people who are better in their diet of omega threes and sulfur based things like the, the brassica family like broccoli, cauliflower, kale, Brussels sprouts, those people are more protected.

And that's proven in animal studies. So they give the animals these things. And then they put them in a moldy barn and then they see, you know, what happens.

And it turns out those that have really good nutritional status are more protected. Their cells literally don't take up the mycotoxins as much. Right.

And also, like is there also mold at school. So now they're getting like a double dose or is there, are they the one in the room with the moldy wall or are they not.

And so, you know, the idea that everybody's going to have the same look to it is really not a right expectation. Right. And and with pans in general, I would say if you know one kid with pans, you know, one kid with pans, it's it's like autism, like many of the things we see.

Yes, there may be an underlying genetic susceptibility, but it's so much more than that. Like you said, their nutrition, their triggers when they got the trigger, what age they were so many different factors.

Yeah. And we're a perfect case in my own home I have identical twin boys and they're they together fit all the clinical criteria but not individually.

It's like they they both went to the the plate of, you know, these are the symptoms of pans. And they each grabbed one. And that's when I learned to about zero negativity I have my yeah kid his ass.

So never came up and still hadn't until he went through IVIg treatments. And finally he was able to mount a response. Whereas my healthier pans kid was through the roof.

ESL positive and I was just like, okay, there's there's more complexity to this story than just strep, right? And I think that's an important point in letting families know, you know, a, a negative strep titer, a normal strep titer doesn't mean it's not pandas.

If if you had the neuropsychiatric symptoms after a strep infection, you should be thinking about strep as a trigger because 30, 40, maybe more percent of these kids have that immunodeficiency like your son and can't mount the response.

And that goes for tick borne disease too. You know, not only do we not test for that, well, you know, you know, it causes the immune immunodeficiency as well as an underlying immunodeficiency wouldn't let you mount the response.

Yeah, yeah, absolutely. That was my lesson too, of like, oh, I need to check total immunoglobulins. Yeah. Before I run any antibody based testing because that, you know, to to expect to see something in the normal range or above normal if we're starting from not enough total soldiers in the first place.

Right. Then, you know, all of the rest of the labs need to be augmented or given some sort of a mathematical

augmentation so that we're saying, okay, this kid can't actually mount a response.

So even a weak positive is a positive in that kid, right? Yeah, absolutely. And and I think some of our tests are even so, gross. Meaning, you know, we we have to look for those low normals, the, those mildly normal.

But abnormals, you know, rather than just the, the really abnormal ones because it's such a spectrum. Yeah. Yeah, absolutely. Yes. So, so, you know, you are my mold expert.

No question about it. Everything that Jill says to do, my patients. No, that's what we'll do. That's it. But but expand on mold and its role in pants if you could just for sure.

So the the way that mold affects the body is mold. Mold fragments which are more allergenic than living mold. So dried out mold that then we do a big DIY remediation or remodeling and we disrupt mold that we didn't know was there, but it's dried out that can actually create more muscle recruitment than living mold.

So being around the colony itself and then mold also if it is living, it's spitting out these chemicals of just I call them mold farts just because that's what it is.

Technically, it's just it's off gassing, you know?

Mold, Mast Cells, and Treatment Approaches

Yeah. And unfortunately the one of those is something called micro phenolic acid. And for those that don't have medical training that are listening, micro phenolic acid is used in medicine called cell set.

And it is used by doctors to suppress the immune system so it doesn't reject the new organ in an organ transplant. Now why would mold make that? Because it's trying to always colonize more territory.

And so if it shuts down our immune system from rejecting foreign substances, it can move in and you can become the mold moldy building. And also the mycotoxins, they are known immuno toxins.

They are toxic to the nervous system because mitochondrial depletion. So the immune system is knocked down in three ways. The cells themselves, the epigenetics meaning the inflammation soup that they are swimming around in.

And then genetic. So mycotoxins can actually rewire you to be more susceptible to fungal infection in all infections. So then we have that in the mitochondrial deficiency.

So now your soldiers are running on low power mode. And that really sets the stage for this immune deficiency. Yeah. Yeah. And and immune metabolic you know like you're saying and and they all play a role together.

And I think one of the things to to bring home also is dead mold is still mold. I mean it's it's still a factor. And, and so many of our contractors etc.

that go into homes and, and poo poo it, I think are causing a lot more damage for our families that are dealing with this as a, as a problem. Absolutely.

Because we really have to talk about I'm so glad you said this because I try to make this point all the time. Dead mold is a fragment. Yeah, that mold has been broken.

If it's still intact, it's dormant. So yeah, all it is waiting for is a really humid summer, and then it starts growing. And so you can be more symptomatic in the summer, but kind of okay, in the, in the winter, vice versa.

Obviously in the winter you got to close up more. But you know, all that dormant mold needs is humidity over 50%. Gee, do you live anywhere that's like a little over 50% recurring.

So yeah, it's that's doing people a lot of harm. A contractor is looking to see is that mold growing a hyphae? Is it making a root? And if it's not they say it's a dead mold.

That's false. That's dormant mold. And we've got to get it out. Mold. Mold should not be in our indoor space period. Right? Absolutely. And say that one more time mold should not be in our indoor space area.

Yeah. And one of the things I get a lot from people is, is, you know, you hear, well, mold can cause this mold. Mycotoxins disease can cause this kind of, you know, a low appetite, a high appetite.

You know, it is explain that a little bit more to people, you know, because mold causes low stomach acid. And I think there are so many different ways it can act and again, act differently in different kids or people.

Yeah, yeah. I actually sat down and did the math because I thought, okay, since it is the norm, not the exception, that everybody reacts differently. How many different variations of a moldy building could there be?

Because that's also really important. Every mold makes a different kind of mycotoxins. Some of them, some mycotoxins are made by different, like multiple species of mold.

And some molds will make multiple toxins. So I sat down and I did the math and I was like, okay, this these are the molds that we can find a moldy building.

Here are the chemicals that one makes. Here's the chemicals that one makes. Here's chemicals that one makes. Here are the bacteria, here's the chemicals.

And it's 15 million possibilities. So no wonder we're missing this. And no wonder it's different because it was like we're basically looking for conditions that are a needle in the haystack, a 1 in 15,000,000.

Yet we have over 25% of buildings built in the US that have a toxic mold problem. So you're, you know, this. That's why this is kind of a complex picture, because as we look at the types of molds, some of them are better at generating mast cells.

Some of them are better at generating, you know, what do I say 20 H2 balance, right. Would be great for helminth therapy, which I've learned from you, you know.

So it depends on the mold. But then what toxin are they making. And that's how we can get this mishmash confusing picture, because we have literally 15 million possibilities of mixes that this person's exposed to.

And we're calling it one condition. Right? Right. Hey it's crazy. And by the way, your math is a heck of a lot better than mine to get to the 15 million.

I would have stopped long before you got there. Oh, no calculator. So trust. Yeah, yeah, yeah. So. But you'd have to look up again. How do I do a probability?

I don't remember that. That times the toxin plus the next spore. Or is it time. But yeah. Anyway, I did the math and it was very illuminating and also really reassuring of like you, if your doctors missed this, they're not a bad doctor.

I mean, it's a really difficult thing to identify. And that's I'm a very impatient practitioner. I like to get to the cause and get to the treatment and have it be targeted.

And I know you're this. You might because I've heard you talking. Yeah, we're very much the same. And so I created a questionnaire for clinical identification of it.

That was Doctor Horowitz has a validated questionnaire that was based on Doctor Beer, Schiano's lime questionnaire. So as I use that same idea where we weight the symptoms with different weights.

So if it's a really common thing and it's not necessarily a mole thing, but it's a common mold thing that's going to get lower weight than something that's targeted to mold.

And it points way more arrows. This is a mold problem. So I created a clinical questionnaire. It's actually right now part of a study where we're validating the questionnaire.

And then we're going to data mine all of that. So we can start to narrow the 15 million possibilities to if you're seeing this cluster of molds, you're probably going to have this cluster of symptoms.

And then we're already working on precision treatment so that if you're seeing this mycotoxins, we know it gets out of the body through this detox pathway.

Let's get that one done more efficiently. Sorry. Yeah. Since you mentioned the study, why don't you just tell people a little bit more about it? Because I think it's so important.

Like you said, we can't do a pro active study where we give, you know, this group of people mold mycotoxins in this group. Not that's not going to happen.

But this study is so important in gathering that data. So can you tell people a little bit more about it and, and where they might be able to to help be part of it?

Thank you. Thanks. And also thanks to the change the IR Foundation, they're they're funding our study and it's at the mold IQ. Org website. People can go there and you can submit your own data.

This is a crowdsourced data collection because we knew that. And I know doctors are busy. You know, getting even like a VA's report done is is a really important thing to do and still doesn't get done.

So, you know, to ask doctors to do this it over the top. So we're just asking anybody, if you have been diagnosed recently with a mold related illness, we're trying to collect for the purpose of right now for validating and now meaning early 2025 for anyone listening two years from now, I, what we're trying to do is get recent diagnostic diagnosed people that you've had some kind of whatever lab test your doctor decided.

We're I'm very agnostic about which test. We just want a test that says this is mold related illness, and then we're correlating your symptoms. And then we're going to we're going to deep dive that and then publish everything that we find.

And we're correlating any building information you may have have if you've had an inspector come and do an inspection. So it's all things you can submit yourself and we're keeping, you know, it's all HIPAA compliant.

It's it's reviewed by an IRB board. So everything's very safe and protected. And so no, you know, personal information is going to be out there for anybody.

It's just your information. So hopefully what we will be able to tell from this is is the questionnaire valid or not. If yes what things are on the questionnaire.

It don't need to be there to you know just keep it shorter. Is there a way we could improve on that for diagnostics. And if it is valid, you can use the questionnaire as a diagnostic instead of a lab test if you're in a low income situation.

So that's our goal is like to offer the IBD questionnaire. There are lots of things in medicine where we use a questionnaire for diagnosis instead of a lab test or in lieu of.

So right. And I think that's so important. I mean, this treating this and having this illness is is so, you know, whether it be pans, pandas, mold disease the whole gamut.

It it's so daunting emotionally, psychologically, physically and financially and in any way that we can help these families. Not keep spending the money that they're spending on testing.

So please fill out the questionnaire if you're newly diagnosed. And if you're one of my patients, I've given it to you, please do it. But anyway, and and one of the things you said earlier that I wanted to touch on a little bit more is, you know, one of the things you taught me that I think is so important is the the connection between some forms of mold, mycotoxins and mast cell activation and mold disease, causing this mast cell mediated disorder.

And unless we recognize that piece and treat that, they're not going to get better either. Right? Right. Absolutely. And when I look at, you know, again, I'm just always researching the studies of like what is the prevalence of this?

And for fungal infections, mast cells are the most recruited. So it's very and when I say infection what do I mean? I'm talking about when, you know because we're breathing mold spores all the time.

So no one should be allergic to mold. For starters, if you're allergic to mold your bucket is too full of that one thing. So pay attention to that. That's a sign of mold related illness.

So what we want is for our bodies to be exposed to, you know, outdoor molds and things like that, and just be able to digest it with snot, you know, with this beautiful stuff we have up here, it's full of enzymes and salts and it can digest things and it's no big deal.

But if somebody is reactive or if they're, they've been exposed to it long enough that the immune system is starting to get impaired. Now, these spores can set up shop, they can become residents and we don't want them to be residents, because once they become a resident, they start acting competitively because our flora says, wait a minute, what are you doing here? You're supposed to be in and out.

You know, you just. We breathe in and breathe out, not sticking around. And if it's sticking around, our own immune system will start to respond differently.

So what used to be a beautiful commensal microbiome of our sinuses slowly transitions into being a biofilm, which is more pathogenic. And what happens with fungi to get themselves started is the minute they become residents, they want to start doing what root.

And when they start rooting, that's when we get the most mast cells recruited. And so that's that was my lesson to me in the article that you were talking about the antifungal treatment of mold related illness was when we added antifungals.

We impaired the rooting. All the mess of stuff stopped. Yeah. And so I was like, okay, there's now I see MRSA activation as a call for help for invasion of some kind.

Now it could be parasites too, because a lot of people that have been exposed to mold when they get that immune depletion leaves them more susceptible to the normal parasites we digest and deal with every day.

Right. They again become residents. So yeah, it could be that. But fungi are very, very proficient at generating methods. Yeah. And and treating the mast cell in addition to treating the fungus, you know, using antifungal herbs sometimes medications, you know treating the mast cell activation has can also be a game changer.

Yeah. Yeah. Absolutely. And there are lots of plants that we can that do many, many different things we need with mold like aloe. The inner layer of aloe is one of my favorites because it's a binder.

Clinical Study, Questionnaires, and Products

I call it the binder that gives back. It's like just it's just like charcoal and clay does the same absorbent, but it gives it's antihistamine, it blocks H1 receptors.

It's an immune modulator. It helps the mucus layer of our gut, our bladder, our respiratory passages. So it soothes. It's doing all of these things. And you know, it's managing mast cells.

It's one of the most potent plant muscle inhibitors that we have. Right. And it it helps counteract the constipation too. So so I, I love aloe. It's you know it I did learn that there is a lot of aloe there that's not real aloe.

Oh so please look at the list of ingredients. You know the the the the ones that start with, you know, sugar as the first ingredient and, and and some other chemical is the second and aloe is down there about the 10th, not the one you want to get.

You want to make sure it's certified as, as an aloe that that is a real aloe product. Yeah. Yeah. Good. Thank you for saying that. Yeah. There's a lot of alteration in the herbal world.

Unfortunately. That's usually my start. You know, when somebody says, oh, I can't tolerate blah blah blah because I have oxalates or I have I'm like, well, let's first start with what version of that plant did you experience exactly?

May not be an oxalate problem. It may not be a salicylate problem. It could be junk. Yeah. It wasn't really clear. Exactly, exactly. And and I was talking to, Tanya Dempsey who does a lot of work in, in mast cells.

The other day. And she was saying with, with medications, you know, one of the things that's very important is what's the vehicle? You know, what what is it being carried in?

What else is in there? It may not be the actual medication. It may be the the gel cap that it's in the, the liquid that it's put in that vehicle is very important to.

So it's one of the reasons I like a lot of the products that you are developing. Do you want to talk about those at all? Oh I'd love to. Oh please do and project. Yes.

Yeah. So I'm working with a company called the Light Health Formulas doing, formulating and getting to do all this stuff like the stuff behind me. For those who are listening, they can't see.

But it's my little herbal shelf back here. All this little mixes that I've been making for these pans, pans, kids and, you know, mold sick patients and Lyme patients, that kind of thing.

So we have four products that are liquid alcohol free herbal glycerin that are a mix of what I call the the botanical avatars for pandas. And that's so they're on the base of that foundation.

These are plants that, you know, if we could pick a plant that's perfect for pandas and pans, what would it do? And we'd have a list, you know, it would be an immune modulator, or it'd be an antibacterial.

It would be a neurotransmitter balancer. It would, you know, help the gut. And of that as we go down antihistamine times. So there are plants that do all of those.

Yeah. And there there's a chemical that ties ties the bind of all of them called try to paranoids happenings which only matters to the herbalist listening.

So when we get those herbs and we put them together and they create this foundation, it just creates this foundation of calm and lifts the, the basement, the the kids are in.

It gets them back to the first floor, you know, and then we can do all the other stuff. So it's not in lieu of it is the thing that stabilizes the whole process.

So that's what I'm working on is not only what we're putting in the bottle, but also some of the things we're leaving out of the bottle that a lot of people would say, oh, that's that's really good for the brain.

And so we should use that. But if a kid is in a dopaminergic or glutamatergic surge, those things can be harmful. So you want to keep those out of the bottle and use them only when you know the kids hit the basement of the got the neurotransmitter thing again.

So it's what's in the bottle, but also what's not in the bottle so that it can be used all throughout the flare. You know, the relapsing remitting cycle, they can be used continuously, and then you can insert all the other stuff that gets them either through a flare or out of a period of despair, because now you can't.

They attack on the dopamine receptors and now they are in, they feel in despair because they're running on low dopamine. So that's the, you know, up down cycle of the condition.

Yeah. And one of the but one of the botanical avatars that you talk about that I love is Chinese skullcap. Yes. I mean that, that that can be really helpful in this foundational, you know.

Yeah. Yeah. Piece. It just kind of is like the bee, you know, just the skullcap there is the. And then all the other things can be on top of it. Right, right.

And, and so many of your products are doing just that. You know, taming the flame with the fever, the, the nettles, things like that, that I think are so key also.

Yeah. And, you know, rosemary is a tricky one in liquid because it can really overwhelm the formula. But I think we've done a nice job of putting enough in there without having them feel like they're eating like garlic potatoes.

And then not orally. And you mentioned this just a few minutes ago, but I wanted to touch on a little bit more. I think the inhalational piece is is really key.

And, you know, sometimes we use nasal sprays, but but you had a great video on your site, I think on a, on a timing of inhalation. So talk more about using, you know, herbs especially, but, but different products and why the inhalation of them is so important.

Yeah. So that back to that idea of the lung microbiome flaring the brain. If we can get things deep into the sinuses and deep into the lungs, then we can start to calm down with the brain is upset about that, that reactivity, that immune reactivity that's happening.

So there are steam inhalations have been used since the beginning of time. Well, so any time I didn't mean that pun, but there's a good one. Yep yep yep. Got it.

Yeah. The first time I heard you say it, I had to think. Is she talking to fire me or to me? Well, they both work. Yeah. So it turns out when we steam these herbs, they become more anti-microbial and more anti-inflammatory than if we did them.

As if we ingested them. Isn't that wild? That is like a kid who's got separation anxiety and that kind of thing would be kind of afraid of being underneath, you know, basically what you're doing is you're steaming the herbs, making a big pot of herb tea, in essence, and then putting your head over the top with a regular dish towel or anything like that, or towel.

But the kids love it. It's like they're they get to just be, you know, they feel protected and they feel better. I mean, I can't tell you. The parents are like, I don't think they've really been down for this, but they love it.

They ask for it and they'll start making their own, say, get the kettle on or they get the microwave water going. I don't care how they get it done. And then, you know, they can make their own.

It's very simple. Yeah. And you can just take the, the fresh herbs and put them in the boiling water. And I mean it's it's a beautiful thing. And and like you're saying the kids can do it with their parents and yeah, I, I had a couple of kids that did it together and they, it was like a little forge.

And they got in there and they, they came out so happy. It was the only thing they ever did together. But you know, a yeah. Yeah. And then there are some herbs like thyme that will help stimulate the cilia, which is the little fingers for those who are listening, the little fingers in our lungs and our sinuses that move all of the secretions up and out.

And a lot of the mold mycotoxins, particularly to Globus, and paralyze the cilia. Now, why would they do that? So they can move in, you know, it's exactly always working for itself.

And so we can use thyme which is antifungal anti strep and antiviral. And then you're inducing the cilia to move. And then it has a brain calming effect as well.

So they're just very I love doing things that are going to do a lot of you know one thing can take care of a lot of problems at once, and it's very easy to do.

But you can also use essential oils, you know, therapy, even if we're not using it for the antimicrobial part in the nose that I use a lot for antifungal, there are certain essential oils that will calm limbic system activation.

And that is so wonderful to see as well. Like I have a lot of parents that are making one mom in town actually, who makes these, and then she sells them to the other families and it's just tansy, lavender, black spruce.

These are all shown to calm limbic activation in the brain. And the kids can have these in their pocket, these little inhalation sticks. And when they're starting to feel intrusive thoughts or anxiety or OCD compulsions, just take a sniff of the inhalation stick.

It's exactly so easy. And my adult son, who's works getting his PhD in chemistry, you know, it's one of those things that's not the best lab to have a previously very sensitive child in.

But, you know, using these the, these sorts of things, whenever he's exposed to something or whenever he's feeling, you know, like you said, a limbic system attack.

And it's a great thing to carry in your pocket, your backpack. You know, these are simple things that are not expensive that really can help, right? Yeah.

And then, you know, on a low budget, you can just buy the essential oils and then recharge the stick yourself, you know. So just you're just basically dumping the oil into these sticks.

It's just a cotton swab. Exactly. Basically. So yeah, it's very simple, very elegant. And it puts the control in their pocket literally, you know, in the.

Yeah. Yeah. Well, well speaking of another intervention that that again I learned from the wonderful doctor Jill. Krista is nicotine patches and I'll tell a quick story of the first young woman that I, that I use this on.

And I had just heard you lecture about it and I thought, okay, I feel comfortable with that. I don't know, Jill. Jill and Jill just had so many more balls than I do anyway.

And and this young woman was really suffering with mold and, and finally was living in a place that she thought was was free of it. And I just really thought she would be better than she was and she wasn't getting better.

And I said, well, just heard at this conference about nicotine patches and I just, I wonder if you would consider trying it. And she said, well, I've never told anybody this, but I smoke, I take a puff of a cigaret every 30 minutes, and that's the only thing that makes me feel better.

And she started using the nicotine patch and I mean it. It was such a game changer for her. So I talk a little bit about that, if you don't mind. Yeah, I would love to. Thank you for letting me.

I know this is kind of controversial. You know, the idea nicotine has been very vilified. It's kind of like marijuana.

We're learning. Oh, we all have endocannabinoid receptors.

And that can be beneficial if used appropriately. That's the same with nicotine. What I what I this is based off of some early Covid studies where they had they were noticing that smokers weren't getting sick and there was a dose response, meaning the more they smoked, the less chance they were getting sick and no hospitalizations.

And that goes completely counter to what we were anticipating because it's a respiratory virus. Right. So how is that happening? So these researchers are like, well, could it be something in the chemicals.

Because there's over 600 additive chemicals, every tobacco product on the market, which is stunning. So is it the piercings which is what they add to make sure that's addictive.

Or could it be the nicotine. And so they they use nicotine patches in these people that had long Covid. It was only for patients even though they didn't do it perfectly.

But the protocol was seven days and then stopped. So basically with a patch every day you replace it every day like you would if you were doing smoking cessation, and then you stop.

And they found out that not only were the symptoms completely gone, but it was durable six months later, which means they didn't even need to repeat it.

So to me, I'm like as an inpatient practitioner, as I said, I like sign me up for that kind of treatment, because this idea of taking something over and over and over again.

So I started trying it with my patients, and I had long Covid and the whole mechanism is there's a different receptor than the Ace2 receptor then that is being attached to by a different peptide than the top of the spike.

So the top of the spike is the Ace2 part.

Nicotine Patches, Binders, and Closing Advice

But there's this other little neurotoxic like peptide on the side that binds to this nicotinic receptor. And my theory is that it's binding to it kind of in a, in a permanent way, or it's permanently changing the confirmation of that receptor.

And so despite this, this peptide has really high affinity. But nicotine has higher affinity because it was originally designed for nicotine as a nicotinic receptor, which if you have a lot of these, you might be once a person who craves a lot of high nicotine foods, like maybe you love eggplant.

Well, I mean, it's highly expressed this, but it also means that you're more susceptible to getting permanent or not permanent long term spike problems.

So as I was using it, I was seeing exactly what they saw in the studies. You know, two years of chronic migraine since Covid, nothing working better in two weeks of nicotine patch treatment.

I mean, there's case after case lost taste and smell. That's a nicotinic receptor damage problem. You can't get back in two days on the nicotine patch.

So it's all of these things that I was seeing long Covid get better. And then I had patients that were like, hey, could this be making my parts better?

And when you look at the what the nicotinic receptor is, it's a nicotinic acetylcholine receptor which runs our autonomic system, right. We're starting to improve symptoms in my disorder, no mere gastroparesis parts patients.

I was like, whoa, yeah, that mechanism makes sense. We've just allowed this receptor to work again. And it doesn't have to be nicotine forever. It's nicotine on and off, you know, on maybe for a week.

And then we take it off for a week and then we put it on for a week. Can we take it out for a week? So and if anyone's worried about addiction, it does create tolerance.

But you can combat that with Theanine is the more nicotine you use, the more receptors you build. But if you're taking theanine, it will keep it down at the original level.

So that's a really easy thing. It's very calming. You can take it at night. So you know, there's ways to do this in a safe way. And then the next thing I was getting was, hey.

Could this be making my mast cell activation better? These are people I have on antifungals and they're getting on a mold and and I'm like, maybe that's like this getting into the mechanisms and the mechanisms and, and I learned that this little peptide that's on the branch of the spike protein is a neurotoxin, but it also disrupts college information.

And it if it's there and stuck in that receptor, the Ace2 mast cells highly express Ace2 receptors. So the longer that thing is sticking in that receptor permanently until we bump it out and nicotine, it's able to the top part is able to agitate all these mast cells.

Right? I part is able to mess up all the collagen. So it's also helping all of my hypermobility patients. So now I'm just like, holy moly. So all your of your patients now are walking around with a nicotine patch, right. Got it, got it.

And I'm trying not to have nicotine goggles on. So I'm trying to apply it appropriately. But you know, I, I had to as I'm seeing these results, I had to expand.

I had to push myself off like how young can I do. Can I feel comfortable using this because I was using a 16 year old? No problem. My nine year old, seven year old. Am I comfortable?

You know, but they are really struggling kids and we're putting them on biologics. Why wouldn't I try this? I'm putting them on, you know, years of anti antibiotics.

Why wouldn't I try this. And it's been phenomenal. Yeah. And one of the things I love about you is it's not just about well I'll try this. So I, I, I read that in some you're really looking at the mechanisms and it's really about the science behind it that there is a reason that this makes sense and that, that and I gotta do one more because, you know, we we both love food based binders and using a lot of chia and flax and, you know, using modified citrus pectin in that way has been a game changer for me, because I think in a lot of these little kids, when we had too many, you know, so much of the time, MDS especially are talking about, well, coal or polystyrene and we end up causing more problems than we're helping because of the constipation we cause.

The problems in the family because it has to be so far from other things we take. Just mention that quickly before I let you get out of here. I know we could talk for weeks. Oh, I could, I could.

Yeah, that I, I that's another thing, you know, trained as a naturopathic doctor I was trained in insoluble fiber and soluble fiber. They're very good bile binders and when we're talking about an inhalational exposure that mycotoxins isn't free floating in the gut, it's in the bloodstream.

And then where does it go? It goes the liver to be packaged in bile. And then the bile is what's carrying it to the gut. So all we need is something that can grab bile.

And that's why. Well, tons. And Kostya I mean are used exact. They are very unspecific binders so they can bind other things, whereas the fiber is binding bile specifically, and it's nourishing the very nutrients that Kostya meaning.

Well, call take out. So when we provide the fiber, that's where we get our vitamin A, so we get a lot of our E, that's where we get, you know, these microbiome nourishing things.

So, you know, swinging back to the beginning, the tummy trouble, you can actually be giving these things that are nourishing the microbiome and that's that's strengthening their immune system and calming their brain.

Yeah. So yeah we do bring it around to full circle. Yeah. Good. Bringing it around there. Jill, you have such a great way of explaining things, and I, I love talking to you.

And and please tell people where they can find some of the things that that, you know, either the survey or your articles, your other podcasts, your courses, which are great.

Yeah. They can go to Doctor christa.com. It's all on there. That's Dr. christa.com. And yeah, I'm starting a whole series of monthly masterclasses unmold where deep diving into just one aspect of it, like binders, like how do you do it?

Not just it's a great idea, but actually how do you do it? What are some of the factors that may tell you to back off a little bit and that kind of thing.

So, so yeah, if anybody's really struggling and they feel like they want some of those individualized topic areas that are the barriers to your recovery, please join us.

Yeah. And any last words or anything that you want to say to the people that might be listening or watching pearls of wisdom, I think when it's I know you're right, right here with me, but get outside.

Oh, yes, get outside. You know, I mean, if weather mold is in your house or you have a pan pans kid whose circadian rhythm is completely off kilter because of their neuroinflammation, that is the original grounding station, you know, and so if that isn't happening every day and I mean every day, multiple times a day, that disconnection is where we can really get off.

And so the people that are better about getting outdoors, connecting with where we really where we are, we're here. We're here on Gaia, that. Yeah, okay.

Recover faster. It's just that simple. So agree. And so get outside. You can take your podcast with you if you want to, but but get out there whether it be in the woods or on the beach or just get in the dirt.

And that's what I recommend. And for so many of our families, we really need that. And and Joe, I cannot thank you enough. And we'll see each other again soon.

For those of you who may not be coming, if you'd like to hear Jill speak, she'll be speaking at Med maps.org in Myrtle Beach in March with me, thrilled that she's going to be doing that.

And thank you again, Jill. Really great to to see you and and especially to hear you. So thank you. Thank you, thank you for tuning in to Doctor Talks.

We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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