Introduction to PANS and PANDAS

Welcome to today's episode of the Mycotoxins and Chronic Illness Summit 2.0. I'm so pleased to have with me today, Doctor Jill. Krista. Welcome, Jill.

We're going to take you. Yeah. Thank you. We're going to talk today about pandas and pans. So, Joe, would you like to start by giving our audience a definition of pens and pandas?

Sure. There are two distinct diagnoses as far as the the criteria that, there are pediatric. So I'm going to refer to children. But adults get it too.

So this is a two distinct criteria that need to be met for these diagnoses. But as a as a collective, they're referred together a lot because they're so similar in what's happening in the brain and what's like the whole pathogenesis of it, so to speak.

So Pandas and pans are two different diagnoses in the same umbrella of autoimmune encephalitis. So these are considered infection induced autoimmune conditions where the the immune system gets confused and it starts attacking the child's brain.

And what I'm trying to expand as well. And I think in that a couple other, you know, naturopathic and functional medicine doctors are saying infection. Yes.

And toxin. So that's why we're here talking about this today. Because this isn't just about infection and it's not. Yes. I mean, I'm finding it a combination of environmental toxicants and infections.

And I'm just going to stop for a second. And, tell the audience what Pan stands for. So Pan stands for pediatric acute Onset Neuropsychiatric syndrome.

And pandas. Yeah. Go ahead. Oh as I say pandas is the same idea. But it's associated with streptococcal infections. Yes. And so in the past in the not too recent past people thought it was only about strep.

And then over the past ten years they've come to realize that it can include many other infections. And what we're going to talk about today is, yes, I think it can include many other infections.

We see that all the time in our practices, but we also see that it includes environmental toxicants. Yeah. Like mom. Imagine that. And so so Joe, a lot of people think that that mold is just about the spore.

But let's let's talk to our audience about the toxins. The molds create the mycotoxins and how that can contribute to pans and pandas. Sure. So mold secretes mycotoxins when it's trying to defend its territory.

How Mold and Mycotoxins Affect the Brain

So it's trying to defend against other microbes. So might be fungus, might be bacteria. And it's it's or a mite seeds. There's lots of things that the mold is, is trying to defend its territory.

Once it finds that sweet spot of extra humidity, it's perfect food that it likes, which is carbohydrates or the way I like to think of it as previously living organic material.

So what do we build our houses with previously living organic material. You know, we build it with with wood. We line drywall with paper, one of molds favorite foods because it's really easy to digest.

So when it finds that sweet spot, it will it, we'll start secreting these mycotoxins to defend itself. The mycotoxins are

designed as a bioweapon by the mold.

We are not the target, but we are affected by these, just like the other microbes are. And these mycotoxins are known toxicants to the nervous system, to the immune system.

And there's that, you know, crossover to something that can cause an autoimmune disease. We see that one of the mycotoxins called trachoma, since it's like the toxic black mold or triggered.

The seeds are also from a mold called few cerium, which is in Hvac ducts and furnace coils and things like that. Those mycotoxins in particular can affect the blood brain barrier.

These immune cells that are there to keep our some this blood brain barrier is like a a selective membrane that only let certain things into the brain.

And it allows waste to leave the brain. But it's very selective about what comes in. And there are immune cells called astrocyte that line that area and trigger the scenes.

Hit those really hard so there isn't a repair part of the blood brain barrier. So then they can get into the brain. And that's where we start to see all of these changes that we're going to be talking about today.

But mycotoxins also wreck the gut. The gut microbiome. They affect kidney function, liver function, anything that is involved in detoxification, they can cause skin problems.

They're basically designed very smartly from the mold to impede all of the metabolic systems of another living system, because this wants to have its own lakefront property.

Yes, I like to stop and talk a little bit more about the brain. So the mycotoxins and the mold spores themselves, they're also triggered, triggering inflammatory cytokines, reading commonly interleukin six, histamine.

Those also travel through the the blood brain barrier via the olfactory nerve and through the proper form plate in the brain. So we see issues with people's hormones as well because it then goes to the pituitary.

Regulate our hormones. So the brain is affected. But as doctor Crystal was saying the gut is well. So we have a highway of nerves from the gut to the brain as well.

So inflammatory cytokines can travel up through the gut brain axis also. So there's so many vehicles by which the toxins themselves and the inflammatory cytokines that they produce can travel through our system causing immune dysregulation.

Yeah. You know an autoimmune disease is not something that just happened overnight. It was the immune system was worn down over time. And we considered that like an immune depletion sometimes to the degree of immune deficiency.

And we can see that on lab testing. And when you see immune deficiency meaning the person has low immunoglobulins or low natural killer cell count or function, the the known consequences of that in medicine, number one is getting more infections and number two is getting more autoimmune diseases.

And so when you look at pandas and pans as being an infection slash toxin induced autoimmune problem, you just married those two top things that can happen from immune deficiency.

And what lowers our immune system the best. Well, mycotoxins and the mold spores can do it because it's so it induces such an inflammatory reaction that it kind of wears out our immune system over time.

All of those immune cells trying to defend the spores from our sinuses and our lung tissue, our whole respiratory tract is lined with these immune cells to denature or take apart the spores so that they can't become an infection.

Well, that's going to wear you out over time if you're breathing moldy air all the time. Yeah. What I'm seeing is a lot of immune dysregulation. So I'm seeing people with a hyperactive immune system on one hand and an a weakened immune system on the other hand.

So on one hand, there's hyperactivity in that. There is an immunity, there is massive activation syndrome. And so immune system making too much noise is overreacting.

Maybe the self, as we know with auto immune disease and with pans and pandas, the brain and and then there's immune weakness simultaneously because the patient isn't able to mount an appropriate immune response to kill off the infection, whether it's strep at strep or any other, associated infection causing the pans or pandas, or for that matter, any other autoimmune condition, and then it shows that that these toxins and mycotoxins cause such immune dysregulation.

Yeah. And so, doctor, doctor, Jill and I are here today to talk about about the combination of the toxins and the infections.

Symptoms, Diagnosis, and Clinical Recognition

Let's talk about how we get from breath to brain. Yeah. So these you had mentioned it earlier the the nasal system. We have little nerves that reach from our brain.

Cranial nerves through that little bone and into our sinuses. And that is a way that these toxins are sort of riding an easy highway back into the brain and not only affecting the pituitary, but affecting an area of the brain that we see having the autoimmune reaction or, you know, attack that we might say, which is the basal ganglia, some of the limbic system.

So we can see these sorts of, the, the attack, we wonder if it was a load up of toxin, and now you get an infection that looks a lot like that same tissue like in the basal ganglia case.

That's why we focus on strap so much, because it has a protein that's really, really similar to the basal ganglia. And so if you have a worn out system you have that hyperactivity that you were talking about in reduced activity.

I see the hyperactivity as a response to reducing activity ability. So then the body is just like no discernment, I don't know, but I don't feel safe.

And so I'm just going to attack anything that looks like a bug. And so you get this called biomimicry. So when we breathe and these toxins, those mycotoxins can ride up those nerves, it's one of the few places we don't have a blood brain barrier.

There's only four places in the brain. We don't have a blood brain barrier. And that's one of them. And that's how because we can breathe it in and it can ride.

And mycotoxins are fat soluble, which means they they don't need a transporter or a doorman or anything like that to let them into these cell types, these, these tissues here it just moves by gradient.

So if there are a bunch, I think of it kind of like the minions in these movies, you know, like despicable like that. They're just like, you know, like bump, like bumping down the way.

And so pretty soon ba ba ba ba boom. You get the more mycotoxins you breathe, the more they move to the lower gradient. And they're going to get all the way into the brainstem and affect the basal ganglia and the organs of the brain.

And so I want to stop and take a moment to talk about the symptoms of pans and pandas. And usually it's, you know, it's supposed to be according to the diagnosis, acute onset of personality changes, OCD as well.

Tics like a motor tics, what I'm finding is it's not always acute onset it, in which case it doesn't fit the exact definitions for pans or pandas. But the symptoms are very similar because it's that part of the brain that's being attacked by the autoimmune antibodies that the body's creating.

From seeing the infections and the toxins. So I'm seeing this more and more. My practice this not only sudden onset but definitely more insidious slow onset.

And then the tell me but he or she is not what they were five years ago. This is not really my child. So there's irritability, hyperactivity, mood swings, sleep disturbances OCD is the big one.

Another symptom I'm finding of course is is sinus infections a lot of pain in the sinuses. A lot of clogging up of the sinuses. Because this doctor Jill was talking about the mycotoxins I love.

I love your minion explanation. Yes. Praise of the minions are they're bumping their way. Bump, bump bump, right. Yeah. But they get stuck there and they travel up through the brain and cross the blood brain barrier.

So now we have sinus issues and all of these changes in personality and behavior as well as the motor tics. Yeah. And, you know, we we can also see regression, you know, so you have a teenager who all of a sudden is doing baby talk, or you have a third grader who can't.

Their handwriting looks like their kindergartner. But I agree with you. In my practice as well, I don't see the acute onset as often as I'm seeing a more gradual onset.

And I think it's because we don't really, we need to change our thinking about OCD when we think of it in a child. When, you know, from my standpoint, when I first think of OCD, I go to the movies, you know, with the open the door, close the door, open the door, close the door, you know, this kind of, like, repetitive kind of thing.

But in a child that if we look at what that OCD means, obsessive compulsive disorder, it may be an obsession, but it may be a compulsion. So it doesn't necessarily have to be both.

And then a child that can look like they're obsessed about keeping their room orderly, and you think, what a great kid, you know. So if you had a kid who all of a sudden becomes very fastidious, you as a parent are giving yourself a high feel like, yeah, I nailed this.

You know, I got to check my kid. And if they have that and we see a lot of urinary frequency and urinary pain in kids with pandas and pans. So if you see a kid get, you know, suddenly fastidious, has urinary pain, kind of vague abdominal pain is pretty common.

And maybe a tick and the tick. Tick child knows is abnormal. So they will work it into something that makes it look normal, or they'll try to hide it.

And that tick is a compulsion. So that's how an OCD can look in a child where it was sudden onset, but it was mild enough and the child knew it was different because they know you know, they can tell that their brain is inflamed.

They knew it was different. And they're they're masking it in a way so that they can, you know, kids want to do be good kids. They want to do the right thing.

So it can start very mild like that until you get to a place where you're getting the rages, you know, all of the things that are a little more frightening and can disrupt a family.

You know, it's great when you have a fastidious kid right now is complaining about that, you know? Yeah, until time goes on. And then they become rageful and it becomes very difficult on the family.

And then the child gets into a psychiatrist I understand why. But what happens is that. This isn't explored. Pans and pandas and the underlying infection underlying toxins.

It it's not considered for the most part. You have to go to a very, very specific doctor, a functional medicine doctor who's trained in these things that would include a doctor about the doctor, of course.

It's a it's a different mindset. So, you know, as if you're seeing something different in your child, different behavior, slow onset or sudden onset. Right?

You want to you want to really wonder if there's a bug or a toxin underneath that and take your child to the appropriate doctor. Yes. Yeah. And parents also need to know that this they don't have to have a lab test to prove it.

The diagnosis for each condition, Pandas and pans has very specific clinical criteria that are just about their symptoms and their behaviors. So you don't have to wait for some magical lab test to say, okay, that's it.

That's what we have. That they're still considered clinical diagnoses, which means you don't need a lab test to have the diagnosis, and you don't need a lab test to have the doctor be able to start treating your child so you can get right on the right on the treatments and get going.

Secondly, I didn't like to to use the neural Zoomer Plus and the Cunningham panel just just to check if there were any. It's like it's it's confirming what we already know.

Kind of like using genetic tests as well. But yes, we can make clinical diagnosis and treat. Yeah. Yeah.

Immune Dysregulation and Treatment Approaches

Because again, so many parents that I work with, their doctor doesn't feel comfortable ordering tests that are out of the system. You know, if they can't get it from quest or something like that.

And, I mean, we have kids. It's when I first started in this field, the estimate was 1 in 500 children, and then a few years later was one and 200 children.

And now that estimate is 1 in 100 children that this is happening to. That's a lot of children, that's a lot of kids, and that's a lot of pediatric patterns that they're going to see.

And pediatricians that are within a model, that ordering a lab that is out of something that they can enter into epic or something like that is uncomfortable for them.

And so that's why I, I wanted to point that out to parents is that this is have your doctor go and look. This is a clinical criteria. The he can he or she can start treating your child without having a lab test.

We would love a lab test to get a baseline. And then the lab test tells us, is our treatment working? You know, are we starting to see these antibodies reversing?

And it's not just about antimicrobials. We have to modulate that immune system to boost it back up again. And that's a very scary thing for doctors to hear when we're talking about an autoimmune disease that they think, oh no, no, we have a hyperactive immune system we don't want to boost, but it's hyperactive because it's so worn down.

It now has no discernment. So when we modulate the immune system that's like giving it a big bear hug and all of the resources that it needs, you know, what do you need?

We're here to support. And then it can calm down those exaggerated reactions. What are your favorite immune modulators? My gosh. Well, I like to start with IgG.

Just things like colostrum, lactoferrin, you know, things that will boost the natural IgG if we can. Peptides if that, if the person is needing to that level.

I think peptides are really important things. Yeah. My favorite my favorites are Tb4 frag for common immune system, KTV, fire support and BPC. 157 for bringing down inflammation.

I find when I when I start with those three peptides and colostrum, yes, I'm able to. It's like be able to go in through the back door. Yeah quicker. So treatment becomes quicker.

And I'll even start with pretty high doses of the peptides like even 3 or 4 cups twice a day for the first three weeks and then bring the dosages down.

Now we're not giving you dosages or medications because we're wanting you to treat yourselves. You want to make sure that you're if you're hearing us talk about certain medicines, that you bring this up to your natural pad, the doctor, your functional medicine doctor, that's really important.

Yeah. I, I came from ranch country where they let cattle go to salt licks. So whatever mineral they need, they go to the lick. We have done that with some of the kids with colostrum.

Just let them eat as many as they want until they're full. And it is amazing how just like three days have gone on a colostrum chewable binge. These kids, just like they don't need as much anti-inflammatory help.

There's a there's a, deeper sense of self that happens, which makes perfect sense when we think about the gut microbiome, brain connection. You know, this now it's there's actually a, a term, you know, the MGB access, which is the microbiota of our gut gut brain axis, which you talked about earlier.

We used to think everything came from here and went down. Right now we're learning that no, they communicate. You know, this is my directional. Yeah. Yeah.

So I call the notorious MGB. I'm like, we're not doing anything about the microbiota. We're not getting at the brain. The way out of this brain problem is through the gut.

So yeah, it's so fun to watch this kind of, you know, free choice, immune modulation. The child will tell you what's working and what's not if you give them. No.

Yeah. Yeah. Let's talk about other infections that can cause us I know strep is the strep is the buzzword right around pandas. But there's a diagnosis of pandas now which doesn't include strep but infections are you finding.

Yeah. So Lyme and associated tick borne infections for sure I would say the one that sticks out the most there is Bartonella. I was about to say that I think Bartonella is a highly, highly underdiagnosed, under-recognized.

I actually I was talking to my local vet and she said that there is no canine test for Bartonella, only a feline, which means we have a whole bunch of people that are dog people and not cat people, where we're not considering that as a possible diagnosis.

You know, Bartonella comes from cat scratch fever, but can also come from the tick bite, as we know. But it can also come from a dog scratch, you know, from it.

And so many dogs have Bartonella and so many kids have Bartonella, and it is the perfect storm, infection for setting up a pandas type infection or pandas type condition because of the kind of tissue that it likes.

The way that it can infect it is transmissible through gestational. So a mom can have it and give it to her baby. So that same with Lyme Borrelia. So their brain never developed under the influence of a normal immune system.

It developed under the influence of an inflamed immune system, which primes the glial cells in our brain, which is the immune cells in our brain that primes them to be, very inducible.

So all it takes is another infection or toxin exposure. And boom, you've just kind of finally hit the the last flame or

the last straw I talked about in my book that it's the last straw.

You know, all the other straws are the toxins, you know, mycotoxins, emfs, mercury. And the big one is glyphosate. This roundup is, bad news for brains.

Bad news for kids brains. Yeah. So, Doctor Jill, tell us about the brain and kids brains. So there's that notorious mob connection. So, two things that glyphosate is doing, and I, I want to credit our colleague, doctor Greg Nye and Stefanie Sun up at MIT.

Just absolutely brilliant that they brought this out, that, the glyphosate has glycine part of it, it's molecule. And it can in theory, we don't know this for sure, but bump away the glycine amino acid from the other things that glycine does.

One really important thing that glycine does is it's a calming neurotransmitter, a calming brain chemical in our brains. We make the majority of our brain chemistry in our gut.

That's the we make the we make it. And then it probably travels that that pathway that you were talking. So when you have an inflamed brain that's been attacked at the basal ganglia, the basal ganglia, the receptors that are being affected are the dopamine receptors.

Dopamine can go either to an excitatory or an inhibitory, meaning a slurring or a calming, direction. But under the influence of inflammation, it's going to go more to the flaring side of it.

So these kids are swimming in too much dopamine, too much glutamate brain chemistry. Those are both very excitatory. That's why we see the tics, and what is supposed to pump up and match that to calm it down is Gaba but also glycine.

Well, if you have glyphosate in the way, then you are not only getting too much inflammation brain chemistry, you're getting not enough calming brain chemistry.

And glycine is also part of the glutathione molecule included. Sound helps us detoxify toxins, so it brings it back around the mold that mycotoxins deplete glucose ion.

Because our body has to plow through so much plant glutathione, even in the cells, in the mitochondria and every tissue in our body, we become good. It's iron deficient.

And so when if you're asking the body to bump up its production of glucose, I am because we all of a sudden have all of these mycotoxins floating around.

But roundup is in the way and you can't make the decision. Then you become more sick from that exposure to the mycotoxins. Thank you. That's such a great explanation. Great.

I try to bring it all the way around. Perfect. That's exactly what happens. And, glyphosate is something I do like to measure, that's for sure. And I'm finding it really high in my patient population.

Infections, Toxins, and the Gut-Brain Connection

So, you know, I'm finding it at the 95th percentile in my patients, and, I'm finding mercury very, very, very high in my patients. So finding many toxins, but glyphosate in particular.

And once I pull the glyphosate out of the system with glutathione and with phosphate, it'll clean. Usually that works. Sometimes it doesn't because the person doesn't have enough mineral status, doesn't have enough amino acid status.

And so we have to shore them up with the cofactors of detoxification first, and then they'll be ready for for

glutathione and I still choline to detoxify the glyphosate and and other chemicals I'm finding in their system.

But I will measure the labs three, six months later. And inevitably the symptoms are shifting. Yeah. Of course, not only am I detoxing, I'm sure you're doing the same thing too.

But killing off infections right this time, continuing to modulate the immune system and in time. Yeah. Yeah. And the other thing that glyphosate does going back to the notorious MGB is you know, when it was tested and it was approved for use was because it was affecting a pathway that humans don't have in our tissues, only bacteria do.

And so they were well, bacteria and the other the pesticides. So the pests, but they said, oh, this is going to be perfect, perfectly safe for humans because we don't have this pathway which Stephanie Sun of has been really you know, she's championed this message, this sugar pathway.

And that's what uses that pathway, our gut microbiota. So now you have we're getting a massive extinction. I feel like of our gut microbiota we are inverted planet.

You know there are more cells of our gut microbiota than there are of our own body. So when you talk about autoimmune being the lack of distinction between self and not self, what really makes up our sense of self, if there are more cells in our body that are the microbiota then ourselves, then really, aren't we really determined as self by the critters in our gut, by the inhabitants of our body planet so to speak, have know if we're killing this off or we basically have a mass extinction because of the round up happening in our gut now we've lost a whole half of ourselves.

No wonder this becomes an autoimmune disease. Very very insightful. Thank you. Yeah. Love that I love that. What makes the what makes the definition of self.

You know, when you really think about it, it's our critters. Yeah. So when you ask about immune modulation, obviously obviously same thing with mold and mycotoxins avoidance, avoidance, avoidance, you know, things that are going to be reducing your immunity.

But probiotics and getting the gut flora repopulated and giving them their favorite food, which is butyrate. I'm fighting is so critically important for regulating the brains in these kids.

It is. I find that as well. Let's talk about treatment. What are your core for? For treatment, for pain in this. Yeah. So the core for is guard the gates, antimicrobials, anti-inflammatories and gut immune modulation.

So those are like if we can get those for in place a lot of the symptoms go away. And then you're just doing fine tuning of the thing. So if ticks are really a problem, even though you have the core four in place, there are little things you can do.

There's research that sweeping helps to reduce ticks, even get your house clean. Your kid can be great. Everything's good. I like that or you know, so then you can do the little things.

If it's sleep problems, if it's, eating and food avoidance, you know, there are other tweaks that you can make. But with the core for what I mean by guard the gates is if we know that this is infection slash toxin induced avoidance of the toxins, getting the toxins out of the body, but also there are particular gates that we want to guard for the body, that we know our problems.

One thing that makes strep very unique is that so strep can, even if it didn't induce the infection or the the autoimmune disease, because we talked about, you know, tick borne illness.

I didn't mention mycoplasma is another huge one. You know, influenza A mini pneumonia. Oh yeah. Yeah. The plasma influenza Covid. Yeah. You know, so even if it wasn't strep, that was the inciting infection.

Strep can cause a flare in both conditions because of how unique it is. It's unique in its ability to change the

immune system of the nose and the throat.

And basically for its own survival. So strep still has to be part of the focus, but it's not the only part of the story. Yeah. So when we're guarding the gates, we want to make sure that we're paying attention to rest verbal infection.

So if with a lot of my kids we're doing essential oil diffusers in their room or maybe in, silver sinus spray if they're old enough to do that or iodide swabs, you know, it can be really simple.

And then making sure that you're using some kind of toothpaste or mouthwash, like a dental seitan or a xylitol mouthwash that is maintaining that oral cavity, so that we're reducing the infection burden of the oral cavity in adults.

I'm finding there's quite a mess underneath. We're canal's old wisdom teeth that have been pulled, mercury amalgams in the mouth. It's causing a lot of immune dysregulation a lot of the times.

In fact, with my patients, if if the mouth gate isn't guarded first, they're not going to get anywhere in that. Luckily it's not. It's not as bad in small children because usually they don't have root canals or mercury amalgams in for children using dental sign in as, as an appropriate toothpaste or oil.

Yeah. That's usually I have to dig a lot deeper. Yeah. About it. Regarding the dental thing with the sinuses, I have everybody do a, a sinus swab. I'm looking for my mark ons and, bacteria and fungi and biofilms.

And I'm finding more and more molds now in people's sinuses, doctor Jill, than I ever did in the past. Or molds and and more. Mercury just floating around the blood unprovoked and more aluminum and arsenic.

And I believe it has to do with my with with the fires in California in particular, my patients here. Wow. Yeah. And I do believe I don't have evidence for it, but I have clinical experience that would say that the higher the metals are, the more molds I'm finding in the sinuses.

And it makes sense. That's how they do. That's how they do mica remediation, you know, Paul Stamets and using particular spores on oil spill areas or places that are made toxic from like a former gas station, and they want to remediate it.

They use fungal spores to bio transform that. So when you you can actually add these certain spores and where there was either petrol or arsenic, you go back and they test the soil and it's gone.

So they've transmuted it. Fungi are they're amazing. I mean, that's the problem that a lot of people think I'm all antifungal, like I'm against all funding.

So I'm not I'm against molds that make people sick. But I love and that's what I teach in my doctor course is at the very end we do mica remediation of the body.

We use these brilliant fungi to bio transform whatever's left over. And so it makes perfect sense.

Dental, Sinus, and Environmental Gateways

And I didn't think about the arsenic. I'm not seeing arsenic increase, but I'm not in an area that had the fire. So that makes and I'm seeing a lot more in my California patients a lot more other chemicals, industrial chemicals, because in the fires, you know what else is burning, right.

All kinds of things, plus tires, you name it. Yeah, yeah, yeah. So I'm glad. Like in my book I talk about the dental gate. That is such a big deal for kids.

But also because the brain stem is affected, these kids can actually get more swelling there. They do get and we can see it on a neuro plant. But they have an in kids. I'll describe it.

They're like, no, my head's too full. I can't move my neck. Right. And that's all happening right here at this occiput area. And if you have them go to to a dentist and they're in that position the whole time, now you've caused drain brain drain problems.

So I try to have my patients set the any dental care that needs to be done, have a cranial sacral appointment done right after so that the brain can drain, because otherwise you will get more swelling after a dentist.

I'll also give, people neural therapy right after to help with lymphatic drainage and and brain drainage. I think I'm going to bring up Doctor Ali Reza Panapa.

Actually, he's a systemic dentist, and he's he's incredible. He works with doctors like us and I'm going to refer him to you to to work with your patients as well.

He's he's opening up, an office at our clinic, actually, to come in and and work with our patients. Yeah, he lives in LA, but he's going to come once every, once a month or so for a couple of weeks and, and, or our patients need it.

They need functional dentistry. So know I do. I hope that he teaches. I hope he's doing. He does. Teaching and mentoring is possible because we need dentists that know this.

He doesn't need and he needs doctors like us because he knows that with with the dental work he's doing, he needs functional network doctors to help support that.

Right. So they work in tandem. So yeah, that is something I'm seeing in my mold patients that they need a little extra binder support around their dental and a little extra microbial support, even if they're not somebody with my mitral valve prolapse or something like that.

It just seems like whatever is being freed up from that oral microbiome, it seems to be really flaring people. So I think our teeth are really important reservoir for we better be paying attention to.

Yeah. And overlook the same with the sinuses. It's they're both big deal. Our gates or gates? Yeah. Guard your gates. Yeah, yeah, yeah. So anything else you want to tell us about?

You covered a lot of work. Yeah. I mean, in May, it's, a light in the dark for pandas and pandas, and it's a lot like my mode. Book work gives very specific recommendations.

So, it gets people started so that they can work with their doctor. And, you know, having support as a parent is so important. I'm a mom of twins of pans.

So, from a congenital Lyme infection, which I was told, you know, as I had fibromyalgia, you know, everybody has body pain, that kind of stuff that you get told when you have chronic Lyme.

And so I didn't know I had Lyme, was one of the thing other than my wonderful sense of humor. That's one of the things that I gave my kids is, is Lyme.

Yeah. And then they developed pans. So, yeah, it's, it is a road and. Doctor Jill, can you talk to our our moms for a moment here? Because you've been through this and a lot of moms, they say it's my fault.

I do this to my kid. They take that lane. And if I tell them, no, it's not your fault. And since you've been through this, if you can offer some some words of wisdom to the moms out there, sure you would never have done this to your kids if you knew.

Of course. So, no, I think I think that is, don't give you give that any more thought and spend all of your focus and your energy on solution and and getting your kid back because, yeah, it does happen.

They do come back and they come back stronger. And you're probably setting your child up for a healthier adult life

because you and I see adults that have not listened to their body who haven't, you know, when you start healthy, you can beat yourself up for a good 40 years before you really fall apart.

And then that some people come to see us, you know? Okay, so what you're actually doing is through this experience, the beauty of this experience is that you are getting invested in cleaning up your environment, which is going to help the planet, and you're getting invested in a clean diet and and healthy eating and movement and probably, you know, a lot of family bonding that you never really would have had the depth of if you didn't go through this experience.

So keep your focus on solutions, and you actually are setting your kid up for a healthier adulthood because they now understand the importance of all of these things.

Thank you. Sure. Yeah. That's beautiful solutions. Yeah, I'm all about it. Yeah, absolutely. Knowing there's a silver lining. Yeah. Well and that's just that's just from watching, you know, kids that I have worked with and you know, I mean, mine are 21, but I started seeing kids at pandas before we knew there was a thing called pans.

That were, you know, 19. And now they're healthy adults, you know, are they always going to be a little bit primed? Do they always have to be a little bit careful?

That's going to be different for every kid. And how whether it was gestational exposure or whether it was not, but I you know, these they are very committed.

Parent Support, Recovery, and Hope

They tend to be very committed to their health and to clean living and being clean and gentle on the planet. And I think that that probably is the message in all of this.

Yes, it's true. In the end, they're healthier than they ever would have been in the year to the planet than they may have ever been. Yeah. And so there is a silver lining, experience healing.

Yeah. And I guess one other tip would just be, you know, if if you are going through this with your child and you're in that place where it's just like, you know, we just found I was mauled in our house, what the heck are we going to do?

You know, like that? Whatever you can do, take the little bitty baby steps and listen to your child. Because if they are avoiding a sibling or the pet, or they're being mean to the pet, or they're avoiding one of the parents parents, get yourself checked for being either strep carriers or mold colony carriers.

That child is telling you what they need if they're repeated hand-washing, they're telling you guess what's the best way we're hearing with Covid to prevent Covid?

Wash our hands, right. So if your kid is repeated hand-washing, they're telling you, my gates are not protected. I am susceptible to infection. I need more antimicrobials and immune modulation.

You know, they're telling me through their behaviors what they need and trust that. Trust your child. Yes. And then and then parents, when you see this and you remember Doctor Jill and I saying this, no, you're not going to get this kind of support from most doctors and don't worry about it, because there's a bunch of doctors were interviewing on this summit, that, that know what to do.

They know how to help you. This doctor. Jill, there's myself and there's there's 30 other doctors I'm interviewing here. And there's a big support network.

So, you know, your child, you know, your child, I, I've had parents be told, you know, well, you know, tics happen in kids. They just need to sleep more or, you know, kids refuse food all the time.

Have you tried ice cream? You know, I was like, really? We came to the doctor. That's how they've tried everything. So if you're getting blown off as a parent, like you're saying, just don't give it any more time.

Go and find the care that your kid needs, and you know your kid better than anybody. Exactly. Yeah, yeah. Oh. Thank you, thank you. Don't know. Thank you. Thanks.

So let me spread the word about pandas and pans and mold and glyphosate and all the the Lyme and Bartonella, all the story. Exactly. Hopefully we didn't overwhelm everybody.

Hopefully we empowered. I think we did. Okay. Thank you. Thank you.