Opening on body burden and podcast intro

I really believe in the body burden. I really, really believe. It's also called your total load theory. And we all have this degree of resilience in our bodies when things come along.

And when we are burdened with infection, with toxicity, with malnutrition, with nutritional insufficiencies, With all the things in our environment, it really disrupts our homeostasis and how we are able to manage more stress that comes along.

You've tried everything. You've changed your diet. You've detoxed. You've even moved homes. And yet, you still feel sick. Headaches, brain fog, fatigue that no one can explain.

What if it's not you? What if it's your environment? Welcome to Mold Microtoxins and More. I'm John Bode. Each week, I sit down with experts uncovering how mold, microtoxins, and environmental exposures affect your health and what real recovery looks like.

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As always, if you think you have a medical emergency, call your doctor or 911 immediately.

Dr. Gutierrezu2019s background in functional pediatric medicine

By listening to the Mold Pros podcast, you acknowledge that you understood this disclosure. Welcome back to Bold Microtoxins and More, the podcast where we explore often hidden environmental factors affecting your family's health.

I'm your host, John Bodie, and I'm joined with Josh Graham, our trusted co-host and producer. And today we're tackling a subject that intersects environmental medicine with pediatric care in ways that many families probably haven't considered.

We're talking about the connection between mold, mycotoxin, and some of the most challenging pediatric diagnosis out there. Autism spectrum disorder, PANS, that's pediatric acute onset neuropsychiatric syndrome, easily said, and PANDAS, pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections.

Our guest today is Dr. Emily Gutierrez, a family medicine practitioner with a specialized focus on pediatric care.

She brings a very unique perspective that bridges conventional medicine and environmental health assessment.

She's a very busy lady with a wealth of knowledge, and we're really fortunate to have her with us today. Hello, Dr. Emily. Hello. Just want to give the people a list of your credentials.

Dr. Gutierrez is a nationally recognized expert in functional medicine. Dr. Gutierrez, she's a doctorally prepared nurse practitioner, certified functional medicine provider, certified clinical nutrition and mental health specialist and MAPS fellow.

Her practice is neuro nutrition associates in Austin, Texas. She's also the co-founder and chief formulator of neuro nutrients, which provides the highest quality professional grade supplements formulated authentically and ethically over a decade of clinical experience, managing patients and integrative and functional medicine.

And Dr. Gutierrez is also, she serves as doctor of nursing practice at John Hopkins university and has served on faculty for over six years lecturing on integrative and functional health.

So welcome Dr. Gutierrez. Well, thank you very much for having me. And I'll just say I have been adjunct faculty for Johns Hopkins. I've been lecturing in their school in nursing for probably six to eight years off and on with a variety of topics.

And I'm probably the first provider that has mentioned mold toxicity to most of the students at the university. So we have great conversations on environmental environmental health and how it affects your own health.

So thanks for having me. I'm happy to be here. We're glad to have you. I know it took us a few months to get this thing put together, to get the schedules to line up, but I'm sure glad we did.

As a parent myself, I've really been looking forward to this conversation. I thought perhaps today we'd start with maybe you share a little bit about your journey into functional medicine and tell us a little bit about your practice.

Also, how do you keep it specialized in pediatric care? Well, that's a great question because in functional medicine, you know, we're seeing more and more people adopt practice in medicine for adults, but not as much for pediatrics.

And there's a great pediatric need as our children have more chronic illness and disease than they ever have in history. So I went in to practice in Austin, Texas, where literally the motto of our city is to keep it weird.

So all of those families that challenged what I wanted to do in primary care, you know, they actually were the families that I didn't want to go into the room.

It was like, Mrs. Smith is here and she's not going to want to do any antibiotics and she's going to challenge the vaccine schedule. And she's going to ask me about a bunch of stuff that I have no idea about.

And, you know, I originally got my master's at the University of Texas at Austin. So it's one of the better, well, I would say it's one of the best nursing schools in the U. S.

So I felt adequately prepared to treat these patients. But what I wasn't adequately prepared for was all of these questions about integrative and holistic health.

So when I went to Johns Hopkins to work on my doctorate, you know, a doctor of nursing practice is a translational doctorate. From what we know in practice to what we have known in science, from the bench to the bedside to what we practice, the translation is about 17 years.

And my doctorate is about translating best evidence into best practice. So when I went there, I got to choose my problem. And my problem was I didn't know how to handle these oil-rubbing tree-hugging hippies that wanted a different type of care.

And I wanted to provide my patients with the best care, no matter what it was called.

Integrative vs functional medicine explained

So it sent me down a journey of learning how to do that clinically, scientifically, ethically, translating it into practice. And anybody that studies integrative medicine will eventually find functional medicine, because there are key differences to it.

Are you aware of the differences between integrative and functional? Yeah, if you want to take some time to share, that would be fantastic. They have tendency to kind of get lumped together oftentimes.

Oftentimes. And I think the differentiation is helpful. So for, let's say, you know, for allergies, for allergies and allopathy, we're really good at saying, oh, you have sneezing, you know, red conjunctivitis, itchy eyes, you have, you know, you can have coughing, et cetera, and oh, that's allergies.

So we're good at saying, what are your symptoms and here's your definition to it. Well, in integrative medicine, you might say, well, you know, your allergies are really You can modify them through nasal rinses, and you can do it through quercetin, luteolin, routine.

What are some botanicals or herbs? So what are the other things that treat the diagnosis, too? They're outside of just, you know, medications. Well, functional medicine says, well, why do you have allergies?

What's going on? You know, is it because you're allergic to pollen? If not, what's in your environment? What's triggering them? What's setting off your immune system?

And why isn't your immune system regulating even when the allergen is identified? So it's more of the why in chronic disease. And I think that really is important in this discussion around mold toxicity as well.

Yeah, makes perfect sense. I think, if I remember correctly, you and I may have actually met at IFM, the Institute for Professional Management, at the conference a few years back.

either AAEM or one of those acronyms, I think we've known each other for years that they all start to blend together. In your practice, of course, you see it's a family practice.

So you see adults and of course you see children as well. So when we talk about environmental conditions and environmental illness, what do you typically see that's common, say for the adults?

in your practice is chronic fatigue syndrome or things like that. And then is that kind of the same with children? Do they have to suffer from the same issues or how does that differ?

Can you share a little bit about that? Sure. Presentation definitely looks different in different groups. That's age groups. That's groups with different genetic variances coming into the toxicity in situations.

It's heterogeneous. So there's many different symptoms for many different populations. And I think that that's what makes mold illness so evasive is, you know, in adults, we know that there can be a lot of chronic fatigue.

In my pediatric population, I had one child diagnosed with excessive sleepiness syndrome. Literally, that was a diagnosis that they gave him. as they were rolling out narcolepsy because he was so tired.

So it depends. Yes, typically in adults, you'll see things like chronic upper respiratory things, chronic fatigue, and then just appearance of a lot of autoimmune stuff.

So your autoimmune triggers really depend on your genetic pathways. There's a saying, you know, the gene loads a gun and the environment pulls the trigger.

So for some people, it might be MS is the pathway. For other people, it might be ankylosing spondylitis. In children, what we'll see is a lot of neuroinflammatory symptoms like more ADHD, learning difficulties.

Environmental illness in adults and children

They might have a lot of hyperactivity and not the sleepiness. You know, a tired child likes to get hyperactive to keep their brain awake, so it looks a little different in childhood.

We'll also commonly see serious eczema and skin issues in the younger population, where in the older population we might see a chronic rash that is kind of evasive, nobody knows where it comes from, and it's deemed autoimmune.

But in smaller children especially, we'll see a tremendous amount of skin issues, including eczema. That can be very, very common. So that's the symptoms that we talked about a lot, Dr.

Emily. So what about the diagnosis and the treatment protocols? How is that different for adults versus children? Well, testing for mold toxicity is, first of all, it's not FDA approved and there's no quote unquote standard of care for it.

And over the last 10 years, there's different labs that have come out with ways to do it in individuals. You know, for example, there's antibody testing now, which is basically you take a blood sample and you look to see if your immune system is mounting antibodies towards certain mycotoxins.

And that can relay that there has been exposure in the system. But there's no standard reference range for that. This is emerging testing. And in children, you can't do that until they're two years old.

So the other way you can do it is through urinary mycotoxin testing. Great Plains Labs, it's now Mosaic, was probably one of the first. Now there's a variety of labs, real-time labs, et cetera, that will do it.

And that can prove difficult in children as well because some of them aren't potty trained. So collecting our first morning void, which is what you need for the sample, can prove quite challenging for younger pediatrics, whereas usually peeing into a cup first thing in the morning isn't a problem for the adults.

But if we're looking at biomarkers to help us with the diagnosis, it's either blood or antibody testing. But that's not the only way I make the diagnosis.

And that's not the only way anyone really should make the diagnosis, because we have to factor in two other things. And one is, what is their environment?

You know, what is the testing in the environment? What is the condition of their environmental exposure? And also, you know, what are their symptoms and is it matching up with a potential toxicity?

Interesting. Well, let's talk a little bit more about autism, PANS, and PANDAS. I know there's some similarities, but there also are some differences.

Can you share a little bit about the differences and similarities between those three conditions? Yes, I love how you got stumbled up on the introduction because it is a mouthful.

It honestly is. And in the beginning, you know, Sue Sweeto of the National Institute of Health I believe it's around 25 years ago now, first recognized something called basal ganglia encephalopathy.

And what that means is there's inflammation in the basal ganglia of these children, and it was identified from having a chronic strep infection. So, you know, strep typically presents as sore throat, fever, vomiting, and you could have a rash.

but it doesn't always present that way. Sometimes kids will pick up strep either in their skin, in their nose, around their anus, not just in their throat, it can be living in their blood, and they are asymptomatic except for their neuropsychiatrics symptoms.

So that inflammation from the basal ganglia, they could present with problems with their gait, problems with meaning how they're walking, they can have motor or vocal tics that come up.

severe sudden onset of these symptoms, including OCD, food restrictions.

Testing for mold toxicity and environmental exposure

Sometimes these kids will get diagnosed as having an eating disorder, which really it's an infection that needs to be cleared. Even things like regression in schoolwork or handwriting and a lot of separation anxiety typically with these kids.

And so Dr. Suido was good at first recognizing that came from strep, but now we've extended the diagnosis to not just include streptococcus, beta-hemolytic strep, but also to include infections that are classically infectious and non-infectious.

And your classic infectious ones are Lyme, mycoplasma, different herpes viruses, even varicella, influenza, COVID-19. And the non-infectious things, and I don't know if it's best said as non-infectious, but the other less classically infection sayings are mold toxicity, environmental toxicity, heavy metal toxicity, glyphosate toxicity.

So that is also on the radar with these kids that have PANS Pandas or have this regression in their mood stability One of the things that I'm always thinking about is what is burdening their little body?

What happened along the way that they're showing all these signs of brain inflammation? And how can we evaluate that thoroughly and systematically to reduce the burden and get this child well?

They just want to understand what's going on with my kid? What is happening? Now, I will pause and say here, of course, we have to understand is there trauma that has been along the way?

Like, are they being bullied at school? Like, is somebody harming them that's watching them outside of school? Like, what else is going on? I think first and foremost, you need to understand that and have that conversation.

But it's not always, you know, antidepressants and psychotherapy that gets these kids better. You know, sometimes getting them better, meaning you have to go and treat what's burdening their systems.

And often it's not just one thing, but it's a basket full of things. So they could have strep throat and mold toxicity. So it's not often that we just find one pathogen that's getting in the way of immune regulation often will find more than one.

That's why I think functional medicine makes a whole lot of sense because it's really trying to get, as you mentioned earlier, it's getting to the why.

What's the root cause of the problem? I think oftentimes it may be too easy in today's environment to just write a script and try to prescribe it away.

And so I think that's one of the big pluses with what you do. Given the complexity of these conditions, how do you balance out the approach between diagnosing the patient and then environmental side of that?

What comes first? What do you recommend? I know that we've done some work for many of your patients in the past on this as an environment, but how do you balance that out?

What kind of order do you take? Can you speak on that a little bit? Yes, I'd be happy to. You know, it's so

devastating to be on this side of the story around mold and a family and tell them, I think your house is making you sick.

I don't say it lightly. I need a partner to confirm it. And I need a trusted partner, somebody that's not going to walk in there and look at the vents and know there's no mold on the vents and I don't smell anything.

And I'm going to take an air quality sample in the middle of the room and walk out and tell you everything's fine. And in fact, I'm going to tell you it's more moldy outside than inside your home.

And that unfortunately is the experience that a lot of families get. So things are missed, but when I tell them. I think it could be your house. I think it might have been that flood that you had two years ago.

I think it might be those moldy, leaky windows that you never got fixed. And we need a partner to come out and really understand, you know, where are the hidden dangers in your house?

Because it's not often that families are just ignoring, you know, a black mold situation in their home. They don't understand that it could be there. Their house might be new.

There's no signs of visible mold and there's no smell. But there might be the history that, you know, we went on vacation with Johnny for two weeks and everyone had the best time ever.

He was so happy. His tics reduced. He wasn't X, Y, and Z. All the symptoms reduced. And then as soon as we got back into the home with no other variables like the stress of reemerging to school or anything else, all of a sudden, you know, he couldn't sleep.

The motor tics came back. The anxiety really skyrocketed. The OCD got worse. So. I will tell all of my patients, I don't know if it's mold in your environment, but I think we need someone qualified to go in and tell us yes or no.

PANS, PANDAS, and infection-driven neuroinflammation

And then if it's a yes, what's the degree of the toxicity? And we all know that if you cannot decrease the exposure or eradicate the exposure, you're not going to get well.

So that depends. Is it just a shower pan on the other side of the house that the rest of the house looks really good? I'm going to defer to you guys to say, can they close off that room and go to the other side of the house?

Are they safe? Or do they need to vacate their home? So what is your typical practice with how severe of what you find? And when you tell the family, do they leave?

Do they stay? How do you handle that? Yeah, that's a good question. And we get asked this question all the time. I think, I think it's an honest question is, is it, is it safe for us to be in here?

Right. And as an IEP, indoor environmental professional, we actually can't provide that guidance. Our job is to come in and assess, a good assessment should be the what, the where, the why, and then a protocol developed on the how to get it resolved.

And so because mold or these environmental contaminants impact people differently, we can go back and we can get the data that says, yes, we have elevations of aspergillus.

And in fact, yes, we have elevations of aspergillus fumigatus, and it happens to be producing this type of mycotoxin at this level. We can give data. We can oftentimes provide why we think it's there.

We have elevated humidity or there was perhaps a water leak. Those sorts of things we can do, but we can't give, we're not allowed to give those health recommendations.

So we hack shaft to get the data and, and encourage them to take this data back to your healthcare provider and have them tell you what he feels best for you and your family.

You've cleaned, repainted and replace filters. And still you're not getting better. Headache, fatigue, brain fog. The doctors can't explain it, but your environment can.

At The Mold Pros, we specialize in uncovering what's hidden in plain sight. Our environmental testing looks beyond surface mold, identifying bacteria, volatile organic compounds, and even micro toxins in the air that you breathe.

Then we correlate those results with your clinical data, showing how your space may be affecting your health. Next, we use our patented remediation process to safely remove toxins, restore balance, and prevent them from returning.

It's more than just a cleanup. It's a science-based system designed to help your body heal by healing the environment first. If you're ready to breathe freely again, visit themoldpros.com and schedule your free consultation.

Because wellness doesn't start in the doctor's office, it starts where you live. Wow. Well, thank you for letting me know that. You know, I think that you are I don't think an industry standard are applying to those rules, meaning I don't think everyone is as cautious and thoughtful about that.

I think some mold inspectors say, get out now, burn your house down. And that is really devastating for a family. You know, your home is usually your primary investment in your entire life financially.

And to tell someone they have to sell or, you know, completely rip down their house to the studs is, it's just, it's devastating. So, you know, if they have a very small mold problem and there is no feasibility for them to get out of the house, They simply can't afford it.

They don't have any grandparents that can help temporarily house them. They can't move. You know, sometimes there is no choice, but they do stay in the home while there is remediation.

I will say I always beg my families to at least go somewhere during that remediation process when they're opening up the walls and they're getting rid of the spores.

But for some of my families, I just think of the severity of the situation. What was the severity of the mold report? What's the severity of the symptoms?

What are things like when you get out of the house? I had this wonderful family, and we treat the entire family. And they bought their dream home, and it was out in the hill country.

And it is built on a slope. So they're downstairs in their basement area and had a faulty water line and wall. And they sent us the picture before even the mold inspector came in and they're like, yeah, we knew there was a little mold down here, but we didn't think it was a problem.

It was the worst picture I'd ever seen a mold. I mean, like the entire downstairs is completely colonized with mold. And I could see it visibly in a picture.

I didn't have to test it. I didn't have to have a mold professional tell me it was there. And that family vacated their house for a year. Both of the parents have chronic fatigue syndrome.

The dad in particular had all kinds of metabolic issues, autoimmune issues, not able to lose weight, not able to, you know, no matter what he did with trying different diets, different supplements, just felt sick, felt tired, didn't feel like the vital 35-year-old man he should.

Mom had a lot of brain fog. That was her number one. And then she had some metabolic things, just putting on

weight, not being able to really get it off despite diet and exercise.

And then the kiddos had pan symptoms. You know, they had all the neuropsychiatric stuff. the first boy, the second boy had more of the respiratory stuff.

So, you know, for some people, depending on their genetic predisposition, you will see, you know, things like all of a sudden they have asthma at age seven.

How environmental assessment fits into treatment

And I'm here to tell you, asthma usually happens early in life. You don't develop it later in life. So that's one of my Gosh, it really gets my goat when they say, oh, I all of a sudden developed asthma.

They're all of a sudden in and out of the ER on multiple different asthma medications, bronchodilators, and thank goodness, so they don't die and they can breathe.

But then the pulmonologist and the pediatrician, it's like, well, it's just lifelong steroids for you. And we don't know why some people get asthma. And I challenge that tremendously because my chronic, all of a sudden you have asthma patients, almost all of them have mold toxicity.

And I have case studies where we got the child out of the home, we put them on the right medication to get rid of the mold. And then all of a sudden they didn't need their asthma medication and they're completely asymptomatic for over a year with no asthma symptoms at all.

So yeah, it depends. I know that was a long response. Well, that sounds challenging. I would say that just sounds like kind of the classic, you know, standard medicine practice versus functional medicine kind of conflict right there.

And I'm sure that's frustrating. And both of you guys run into that a lot. Is that something you see changing maybe just to a little degree where, you know, maybe it is the environment and being more of a standard kind of answer for some of these symptoms?

Is that something you guys see changing a little bit? I think so. It's a slow change, but I do believe it's changing somewhat. I mean, here's the truth, is a lot of families go into their pediatricians or their doctors and they show them a mold report and they say, we have mold toxicity.

And about 80% of them say, this doesn't exist. And they gaslight them. They're like, you think there's a problem that there's not and you're making it up and there's no evidence to the contrary.

And not all of the providers do that. I think people are coming along. With asthma in particular, we've known that asthma can have environmental triggers, but we don't look for mold mycotoxins.

We look for cedar and pollen and dogs and cats. So it's just not on the environmental list is something that could be true causing this. But I do believe because most parents They either, one, never go back and see that pediatrician or provider, literally.

They never go back there. And we've seen that year after year after year, patient story after patient story. Or there's the families that really dig in and say, okay, I respect your opinion on this.

We're going to do it anyway. And we'll come back and let you know how it went. And when they do that and they talk to their medical provider, sometimes they win them over.

But I can tell you what'll change, Josh. I can tell you what will change a provider's mind is when they go through it themselves. When they go through something really hard, chronic health-wise, they apply functional and environmental medicine to the differential of what's causing it.

They reverse those symptoms and they get better. And then, voila, you have a believer forever and they'll never go back to believing the old paradigm because they have a lived experience that it worked for themselves or one of their family members.

That's interesting. Yeah, it resonates a whole lot more when they've lived it for sure. If you can share with us, you know, it's pretty complex. And it certainly may not be a linear approach, but say I'm a parent and I'm starting to see some abnormal behavior or what have you with a child.

What's the approach, the timeline, at least in your practice, or of cadence for treating the individual and identifying, diagnosing, and also treating that environment, which may be a contributing factor for these things.

How is it approached in your practice? Because it could be a lot longer than people expect. Is that right? Yes. And Josh, do you mean just figuring it out or do you mean the treatment?

I think John's talking about the length of the plan, right?

Remediation, relocation, and real-world case examples

Well, yeah. So, hey, my kids are not sleeping. They're hyperactive. I've seen changes in their behavior, whether they're not eating or what have you. And so we go to visit you at your clinic and there's a diagnosis that occurs or some testing.

Kenny, walk us through that timeline, what that looks like, and then at what point do you integrate or investigate or have investigated the environmental factors to see if there's contributing things to get to that root cause.

So it's a little different with everyone because you have to have the willingness of the parents to look at their home first. So we'll always say, you know, the first thing we should do is get you out of the toxic environment.

That's first line of order. If we believe it's toxic, So if there's reasonable doubt that there could be a toxicity and it might be through a history like, you know, well, yeah, we do have a musty smell or yeah, the windows are a little weepy or yeah, our dishwasher keeps flooding, but we clean it up every time.

I'll say, I think that we should get an evaluation. And it depends also on the family because sometimes the moms are like, whatever it takes, let's get it now.

And the dad is like, absolutely not. We're not going to have a stain on our house. We're not going to test for mold. So it depends on when they actually have the mold evaluation in the home.

There's also people that rent and is like, you know what? I don't care. We're going to get out of this house and we don't have to test. I won't spend the money on testing.

We're just leaving the environment. But the problem is, is they should test the environment they're going into before they signed another lease, I believe.

So once we identify that there's symptoms, the mold diagnosis might fit, we might do some testing, we do testing in the individual, we do testing in the environment, and that window should happen really simultaneously.

As soon as you have the suspension, I believe that you should test the patient and you should test the environment. And then after that, when you get results back, you know, it is about, there's no standard of care on how you treat mold in a child or an adult.

It is through clinical experience that we have treatment that we've seen that has worked over time, and there's some consensus in the industry. But you're not going to find a Cochrane review that says this is how you treat mold toxicity.

I think that everyone will ubiquitously say, get the person out of the exposure. That's first and foremost. And then you have to really make sure that the upper sinuses are not colonized.

You have to do things like use charcoal and binders and sometimes medications like coli styramine. And then sometimes we'll use antifungals. Antifungals come with a lot of clinical nuance.

Some of them can be really toxic for the liver, interact with other medications. You have to be very mindful when you prescribe them. There are antifungals that are a little bit more gentle, in my experience work better in the younger population.

For example, I could use Nystatin, which I think should be over the counter. It's so safe and effective and it's so well tolerated. But I could use that in a three-year-old, but in a, you know, a 20-year-old, if they're full of mycotoxins, they might need, you know, a heavy-hitting antifungal like itraconazole.

So in my experience, it's usually make sure they're out of the environment, make sure their airway, including their sinus passages, are cleaned out and we don't need to do any work around that.

Put them on some binders so their liver quits putting the mycotoxin back into the gut and we can bind it up to get it out, which means your patients certainly don't need to be suffering from constipation either.

It just makes the whole thing worse. and we might give antifungals, and we for certain always give antioxidants. So when a toxin makes an oxidative stressor in your body, and the audience, if you don't know what oxidative stress is, it's like Just imagine if you took a bite of an apple and you set it on the counter, and then you came back after a week, what would it look like?

It would be brown and shriveled up. That's oxidative stress on the fruit. Well, our body, when it experiences toxicity, undergoes a lot of oxidation and oxidative stress, and that stress really incites a lot of neuroinflammation.

So, we use antioxidants to ameliorate the effects of oxidative stress. Glutathione is one of the number one things that we use. So, how long this takes depends on the person, the compliance to the plan, and to the degree of toxicity.

So, if I have a three-year-old that has been out of the house for six months, so out of a toxic mold house, but they still have a high degree of toxicity.

You know, I can make lots of movement in a three-year-old if the parents are compliant with the plan of care. I have one little girl right now I'm working with that very, very, very, very toxic on mold.

Presenting symptoms were eczema, like the very severe eczema.

Treatment protocols for mold toxicity in children

And then even started having some PANS-type symptoms, even at three. So a lot of neuropsychiatric things. So we started treating her. We just did her second round of mold testing in the body.

Half of it's reduced, and 50% of her symptoms are gone. And we've been doing it for six weeks. So we're going to do it for another six weeks to her, so we make sure we get it all.

But the earlier you treat, you don't have to treat for as long. But in an adult, if you have a lot of complexes, you know, if you have a lot of complexity, if you have a lot of comorbidities, so some other things going on, you know, with autoimmunity, it could take six months to a year to get you treated.

When we talk about, you're talking about the mycotoxin exposures, is there a particular mycotoxin or mycotoxin group that you see in your PANS and PANDA patients?

ochratoxin or aflatoxins, gliotoxins, or the aspergillus, just saline-based toxins primarily that you're seeing? You know, when there's a gliotoxin, I tend to see more neuroinflammatory stress.

I do. I think it's easy to see ochratoxin and aflatoxin. It's probably the most common one that I see. I just, you know, if it's just a teeny tiny bit on labs, can you dismiss that as a food exposure?

I'm not sure. Often when I diagnose a patient with a toxicity, they have a basket of them. It's not just one that's coming up, it's all of them. And, you know, the higher the gliotoxin, typically the more the inflammatory stress on the brain that I see in my experience.

Now, I can't give you a peer-reviewed research. paper to validate that. But, you know, in my career right now, I'm trying to slow down and do more research so we can publish on the outcomes that we are seeing, which are remarkable.

Because you know what? Some doctors and providers will not believe it unless they go through their own lived experience and tell there's a paper written on it.

They just will not. Yeah. You know, it's interesting. I think there's such a big change and I'm glad. I love the research. I'm a pub bed junkie digging up papers.

So you can certainly identify with that. One of the last conferences ice or maybe the conference before last. I saw a slide or a presentation about autism in children.

And I thought it was really interesting that they said in like the 1970s, there were four diagnosed autism cases per 10,000 kids. And in the nineties that had just mushroomed to one in 500. And then something that came out from the CDC, I guess in 2022 said that one in out of 31 children would be diagnosed by the age of eight.

So it almost seems like just an epidemic, uh, in, in this, uh, for this condition. So two part question, you know, why, why the increase do you think is it better diagnosis, better understanding of the condition?

Is it perhaps change in our environmental exposures with whether it's contaminants from mold or bacteria or EMFs or what have you, or, you know, And if so, why haven't these connections been made before?

Are we just more exposed or we just were unaware? What's your take on that? Well, it's a complex answer to a complex question. I certainly think that recognizing the diagnosis, there's a greater awareness out there of that.

And we've lumped together some diagnosis like from pervasive developmental disorder to autosome spectrum disorder. to apraxia, you name it, there's in the ICD-10 coding, the diagnostic coding, it has changed over the year.

Now, can that account for the tremendous rise in autism? I don't believe so. Not in my experience. And remember, I do have a skewed patient population because, you know, probably half of my practice are children with autism.

And, you know, autism needs to change as far as what we're calling autism because we're not talking about level one autism, which is, I'm super smart, I have some social quirks, and this diagnosis is going to serve me throughout my life.

What we're talking about is more severe forms of autism, which are regression and developmental symptoms, headbanging, irritability, not being able to speak, not being able to do daily tasks, to have a lot, a lot, a lot of support.

So the severity of autism is, it doesn't capture it when you just say autism. So is the rise in diagnosis some of, you know, the quirky level one that benefits you having autism?

Possibly, but in my career, I've seen more and more and more level two and three autism walk through my door.

Mycotoxins, autism, and total load theory

And I would say that that's ubiquitous for that fellowship that I'm a part of, the Medical Academy of Pediatric Special Needs. All the providers would back me up on that, that they have seen a rise in autism in their careers as well, exponential rise.

So what's the cause of it? I really believe in the body burden. I really, really believe it's also called your total load theory. And we all have this degree of resilience in our bodies when things come along.

And when we are burdened with infection, with toxicity, with malnutrition, with nutritional insufficiencies, with all the things in our environment, it really disrupts our homeostasis in how we are able to manage more stress that comes along.

And so there's a tipping point for children. If they are born toxic, which many are, we've elucidated that through cord blood. We'll see more toxic infants.

We have lots of studies to say that on different measures. And then you throw the environment. You throw a lot of inflammatory stressors on them. They can have a regression.

So it's multifactorial. It's fully abnormalities. It's mitochondrial stressors. It's toxicity. It's genetic predisposition. It's very, very multifactorial.

That's why you're never going to find that there's this one gene or one cause for autism. Even if, like they talked about Leukovorin treating autism, which by the way it can, there's so much nuance on the why because Leukovorin is actually treating something called cerebral folate deficiency.

And cerebral folate deficiency happens when there's a lot of oxidative stress in the body. So it still comes back to the total load. Josh, today you have a total load.

Maybe it's worse than yesterday because last night you had three beers and you didn't sleep. You know, my total load changes every day too. Did I watch my stress?

Did I sleep enough? Did I exercise? So everything matters and that's I know that was a long answer to a short question, but it's complex and it's multifactorial and functional medicine can be very helpful in improving symptoms of autism, hands down.

To that point, you know, as a parent, and I can only imagine having a child that's dealing with these difficulties and challenges, right? It's about enough to have both your house.

And then when it's impacting the health of you or your family, that's all another thing. I think that when it's your kid and something as severe as autism or pans or panda, that just in my mind cranks it up a whole nother notch or two.

Do you have a situation where? you've seen, I mean, is there hope? Is there a case where you could point to this as, yeah, we had a child that we were able that perhaps was nonverbal and we're able to go through and identify the root cause and they're on the road to wellness or on the road recovery.

This is not a life sentence, so to speak. I think if you had something like that to share, that would just bring some hope to some folks that are out there.

Oh yeah, I followed up with a patient yesterday, one of my favorite families. I've been seeing this little kiddo and he's seven now. I started seeing him when he was two.

He was nonverbal, had lots of stimming, had lots of behaviors. Parents were like, we'll do whatever it takes to make him well. Right. We applied, you know, the functional medicine approach to him.

I followed up with him yesterday. I'm sitting in my office and I hear him in the waiting room and he's just chatting it up with my, you know, receptionist.

And he comes back and he's like immediately looking me in the eye. We have a great conversation. And then he's like demanding, how long is this going to take?

And, you know, like I'll tolerate this, but you know, his communication was amazing. I mean, it was amazing. He went from level three autism to level one, and I looked his parents in the eyes yesterday and I said, you know, he might always need some support around his socialization, but I believe one day No one will be able to pick up that he was severely autistic when he was young.

I believe that truly for that child. And you know what? Parents need a win. And so if you have somebody come in and they start doing functional medicine and they're overwhelmed and it's very complex and there's all these things that they have to do to get rid of their, you know, toxic pans in their house and their toxic air and their toxic food.

Hopeful outcomes and recovery stories

You know, when they slowly chip away at it and they start to see improvements in their child, it lights a fire in them and they are willing to do what you're asking them to do.

And then they see more improvements and then they become fierce advocates for this type of work in autism because they see it helping their child become neurotypical.

Now, I will say the earlier the intervention, the better the outcome. So it's harder for me to move the needle in a 19 year old boy than it is a 19 month boy.

But boy, we can move it and we can do very, very hopeful and significant things. Very good. That's great. I know we're coming up on our time, but are there any resources?

It's been a great conversation. Are there any resources you'd recommend for any of the listeners out there? Yeah. Well, thank you for allowing me to promote it or to say it.

So I went to the Medical Academy of Pediatric Special Needs last fall, and I gave a talk on autism. And anytime I put together a presentation, I work probably 30 to 50 hours on it, because I just want to make sure every single reference is right, and I'm meticulous about the science.

So I took that and I broke it down into three modules and I recorded it for parents. And it's on our website. It's under Modules on NeuroNutritionAssociates.com.

And it is me going through the functional medicine approach to autism. At the end, you get a guide for different supplements you might want to try. And you can buy just the modules.

I think the modules are $199. Or you can buy the modules plus some health coaching. And health coaching is really access to my amazing health coach, Alexis Maple, that she goes through and she just kind of helps you start figuring out about your environment.

Resources, modules, and closing remarks

about the nutrition and about how to apply the concepts that you've learned through the modules. So she's a huge value add. And a lot of people can't access this type of care.

I currently don't see a lot of new patients. I will see them selectively. The other providers in my practice are seeing new patients. So this is a way to get access if you're in Hawaii or if you're in South Dakota.

So there's no state restrictions on this. So I did this from the bottom of my heart to bring access to care to families

that are suffering with autism and want to do a functional medicine approach and just can't access care to get it done or just can't find providers that know a lot about this.

Thanks again, Emily, for joining us. This has been great. And you talked about the module that you have on your site about autism. I think people will be really glad to read more about that.

And then we should also mention, John, that we got a great promo for any listeners. You can get a hundred dollars off in an environmental inspection by using the code neuronutrition.

So just go to the mold pros and go to contact and send an email and in the memo line and in the body, just put the promo code neuronutrition and get a hundred dollars off.

And we will have all your information on the show notes at the bottom of the podcast and on the YouTube recording. And again, thanks a lot for all your time today.

Awesome. Thank you guys. Yeah, I really appreciate you joining. Josh, I told you and all the listeners told you she's just not only a very busy lady, but a wealth of knowledge.

So we're blessed to have you on the podcast. Thank you so much. Look forward to talking to you again soon. Really appreciate your insights. Yeah, great.

Thank you for having me on. It's been a lot of fun.