



Addressing MCAS In Children

Beth O' Hara, FN With
Jill Crista, ND



Beth O' Hara, FN

Welcome back to the Reversing Mast Cell Activation and Histamine Intolerance Summit. I'm your host, Beth O'Hara, of Mast Cell 360. And we have with us a dear friend, a colleague, and a mentor of mine, Jill Crista. So happy that she's joining us. We're gonna be talking about addressing mast cell activation in children. And one of the many, many things I love about her work is she has so many tips and tricks, because it's different than how you do this for adults. So let me tell you a little bit about her background. If you haven't met Dr. Jill before, she's a pioneering naturopathic doctor. She's a bestselling author, an educator, and a creative innovator, and she focuses on conditions that cause injury to the brain and the nervous system including mold, PANS and PANDAS, Lyme disease, and concussion. One of the things I really love about her as well is that her passion is to elevate the wellbeing of the planet via the wellbeing of our inhabitants on the Earth. And she has books and memberships and online courses with these concrete action steps to help you conquer health challenges, and her superpower is to make these really complex medical concepts simple and digestible for the average person. Thank you so much for being with us.

Jill Crista, ND

Thank you, what a treat. It's always a treat just to get to chat with you, so I'm looking forward to this.

Beth O' Hara, FN

Well, ditto, and I'm in your mentorship program, and it's really helped me in terms of my own practice. And I love the work that you do. Can you tell us a little bit, how you got into this? 'Cause nobody gets into this, 'cause they think, oh, let's get into mast cell activation. That's a great field. I



don't know anything about it. There's always a story and a journey. How did you get into specializing in neuroinflammation and the work that you do with children in all of these areas?

Jill Crista, ND

Kind of two-prong. There's both practice and personal experience. In practice, I ended up in a Lyme endemic area and didn't really realize that, and didn't really know what to do with Lyme disease. So I went and got trained through the ILADS Physician Training Program, and with naturopathic medicine, as you know, when we identify and then treat the cause, people tend to get better. There was still this group of people that weren't getting better with the treatment, and it turned out that in one of those patients, they found toxic black mold in his home, and it had been an estimated 10 to 12 year exposure. And that got me thinking, wow, I don't think I really understand mold. Even though in naturopathic school, I was trained that it is more than an allergy problem, yes, it's an allergy problem and, yes, it stimulates mast cells, but there's this whole other thing that's going on there that has to do with the toxin piece.

So as I got into the research, I was able to identify so many of the other patients that weren't responding fully, that I think they have mold. And so we went down that road, and mold, as you know, is one of the best stimulators and promoters of mast cell, mast cell in numbers, mast cell degranulation, mast cell activation. I went down that road then trying to figure out how to calm all these people's bodies down, 'cause it's that weird combination of overactive, but depleted at the same time. So it creates a very confusing picture of just allergies outta control, which is where somebody doesn't have all the depletion. So that's how I got into it as a practitioner, and then became kind of known in my little circle as the mold lady.

But on the personal side, I have twin boys who have PANS due to me having chronic Lyme and not knowing it. I was told I had fibromyalgia. Everybody has aches and pains. Get up, pull yourself up by your own bootstraps kind of thing. And them being born with Lyme unidentified and having Lyme from the time they were developing, it set the stage for the autoimmune condition to happen. So in the midst of being in practice, working with people who had chronic Lyme, mold illness, mast cell, of course, we didn't have a name for it back then, just called it like allergies, but it never really fit to call it allergies, hypersensitivity, and all these kind of words that we were using to describe it, and then at home seeing a lot of the correlations of, wow, this is looking like that patient that that symptom would look just a teeny bit different in kids where it's gonna be more behavior problems, sleep problems, developmental delays, maybe regression



issues, and that's when we started tipping into the PANS story. But yeah, mast cell activation, I'm so glad it finally has a name. And I'm so grateful for the researchers that are starting to explain that it's not just histamine. There's all these other things that can happen when a mast cell is irritated and when it's been recruited. So that's kind of the story how I got here.

Beth O' Hara, FN

And it's not just an IgE, which there's so much literature just on mast cells and IgE, and for a long time, that's what it was thought was the only kind of response that we were getting. Now we know we've got these 200 plus receptors and 1,000 mediators and-

Jill Crista, ND

And they can go anywhere. No it's not just skin and sinuses or anything like that or itchy eyes.

Beth O' Hara, FN

Yeah, and they cross the blood brain barrier, but even I found it so interesting that there was even a 2017 paper that said that mast cells aren't found in the central nervous system. And yet we know that now that they're found in the limbic system, and then they can migrate when we get that leaky blood brain barrier.

Jill Crista, ND

Wow, so that recently. I wasn't aware of that that it was kind of ruled out as a brain contributor.

Beth O' Hara, FN

Well, I think that we just see this evolution of the information, the education, even just having gotten that diagnostic code in 2016, but it's clearly been here for a really long time.

Jill Crista, ND

Yeah, right, right.

Beth O' Hara, FN

Which kinda brings us to another interesting point I love asking people about, which is, are you seeing mast activation syndrome increase in children? Are you seeing it get more frequent?



Jill Crista, ND

I am, and I think it's because we're also seeing problems with how we're building buildings, and that it's encouraging mold growth. So we've got schools that are moldy. We're not funding schools well enough to maintain their buildings, and they have flat roofs. We've seen hospitals. We're seeing all kinds of places that you would buy your food and then you take it home. How many grocery stores do you know that have a flat roof? So I think that there's that piece. There's also the ultra tight home, the emphasis on spray foam everything and seal your house up really great. Fantastic for your electric bill, really bad for mold growth. So we've got that combination. We're also using antifungal paint.

So we're creating superbug fungus, and we're using much more weed killer and things that are gonna disrupt the gut microbiome. We got food additives, food colorings. Kids are not eating whole food. Parents don't know how to cook anymore. So, we're at the next generation of places where we're basically feeding our kids out of a box store that has mold, and then out of the box that you bring home instead of eating real food. I have so much compassion for parents, because there's just this whole time element in our culture. It's a real commitment to diet and to healthy lifestyle and to saying no to activities where your kid really wants to be active. So I do see it on the rise, and I think it's because of our lifestyle and also how we're building buildings.

Beth O' Hara, FN

And I think, too, our children aren't starting in the same set point as 100, 150 years ago. Even just thinking about you were talking about the congenital Lyme and how that can pass. We know mold toxins pass through the placenta, through the breast milk, they can pee... I've had people tell me their grandmothers they thought died from mold toxicity, and the mother was sick, and they were sick. But even the chemical accumulation, the amount of chemicals being found in cord blood, it's just astronomical what kids are being hit with today. We get kids that come in that have been sick since birth. I see that so often now. Whereas 10 years ago, people were getting hit later in life, at least the people I was seeing.

Jill Crista, ND

Yeah, when I started practice, and that's a couple decades ago, we would make small tweaks to a diet, give 'em a little adrenal adaptogens, and talk about why sleep is important, and that used to be my biggest battle was describing to people that, yeah, actually sleep is really important, because in those days, we had this machismo about sleep, you know, "I only need four hours and



I can..." And I'd be like pleading with someone, "Please go to bed." And you finally convince someone that sleep matters and that a little bit of diet change and some adrenal help and people got better. Now, it's taking so much more finesse to see a difference. So I think you're right. I mean, it's a real statement that we can't breathe the air and drink the water where we live outdoor, let alone the indoor mold problem. Yeah, we're in a spot. We need to be making some changes. And that said, I always remember the miraculous human nature in nature that we will evolve. We will figure out. And that I think is happening with the newer babies that I'm seeing is that they just kind of take some of that stuff and roll with it. It's almost like they came in... I think the whole polymorphism thing for methylation was our first like, yikes, how am I gonna deal with this? And now, there's almost like an adaptation that has happened to handle a little bit more. That doesn't mean we don't cut it down, but it is a hopeful little message that I'm seeing that evolution is happening in our various species.

Beth O' Hara, FN

That's wonderful. And in the meantime, we have a lot that we can do. We're gonna dive into some of those things, but you touched on before that how some of these things show up differently in children. Can we talk about how you see mast cell activation showing up in children that may actually end up with them being misdiagnosed or not being diagnosed, because what's being written about is mostly the adult presentations?

Jill Crista, ND

Right, right. So, kids, typically their first thing, because they have vitality, their first thing will be to have a skin problem. And we need to really pay attention when a kid has a skin rash from something, either from eating something and they get the rash around their mouth, or they have like the postprandial, so they ate something and it's been 20 minutes, and now some kind of weird rash is showing up, and it's gonna be very different looking for every kid, because mast cells have this unique thing that they differently differentiate, meaning that they get recruited to an area, and then they will change what they look like and what kind of granules they create based on the location, but also based on the soup that they're swimming in. So it's gonna look completely different in every kid, which makes it very difficult. It's not like with Lyme disease, you see a migrating red rash. So that's our first sign though. If you see something like that with either your child's behavior goes to way too calm or hyperactive, so you see a skin rash and some sort of behavior change drift in the period of time after they've eaten something, the reason why it wasn't necessarily the food is just that that then tips the threshold of histamine over. And it's not



always histamine. I love that you keep reminding us of that, but that is one of 'em that we can see in the symptoms. So often what happens is the skin rash is covered up by a steroid cream and the behavior gets worse. And then we blame the behavior. And that's where that progression that I'm seeing that you see skin rash, behavior drift, if we don't pay attention to that, then we get gut typically, 'cause again, they're vital. Their bodies will try to keep it out of the brain and out of the behavior, but because kids are growing, they have a little bit leakier brains than adults do. So they're going to see that behavior thing sooner than an adult would. An adult won't necessarily follow this pattern, and it may take a lot longer for the adult to display the brain effects, because they have, hopefully, a closed up blood brain barrier.

Now we know mold can mess that up, but, yeah, in a kid, typically what I'm seeing is then the gut symptoms are gonna be more a diarrhea type of a reaction where in an adult it might look more like constipation or alternating constipation diarrhea, but in a child, they know, wow, that food wasn't good for me. Let's go get rid of it. And then they get a loose stool or diarrhea. So what do we think? Skin rash, tired kid, diarrhea, must be virus. But if you're seeing your kid have a virus happening over and over and over again, then we have to pay attention. Sometimes you can even see a mild low-grade fever as well when we're really in a situation of an early exposure to a moldy environment and the mast cells are starting to get recruited. What I'm seeing in my practice is that the mast cells start to get recruited when the mold is trying to move in and is winning a little bit. So that's your sign also that not only get out of that building, but that might be the time to engage some antifungal plants.

Beth O' Hara, FN

I think this is so important. You're talking about the behavioral pieces. Right now, there's this huge rise of kids getting diagnosed with ADD, ADHD, even bipolar. And I often wonder, well, one, those are biochemical things anyway, but we're not looking enough at what's triggering this, what's causing this, and it's such an important social and emotional developmental phase as well. Some light bulbs are going off in my own story in that I had mold exposure starting at seven. I had Lyme disease at an early age. I don't know when it started, bartonella, and I couldn't pay attention. I was smart, but I couldn't even process. I remember one time the teacher would call rows. You'd be called a row to go get your art box or whatever. And I really wanted to do what I was supposed to be doing. And I would hear my row be called, and I couldn't track who was getting up. So I would get up at the wrong time, and I would be labeled as not being obedient.



Jill Crista, ND

A good girl.

Beth O' Hara, FN

Yeah, not being a good girl. And I was trying so hard, but I just couldn't process what was going on. And I just wanna share that, 'cause it might bring some light bulbs on for some other parents going, oh, maybe my kids aren't intentionally being defiant, or maybe they're really struggling. I didn't have a voice at that age to say I didn't understand, or I didn't... So I just took it all as shame like I was bad.

Jill Crista, ND

Yeah, yeah, 'cause it's the only brain you know. So it's not like you can compare to a healthy you. As we get older, we have good days and bad days, and we can start to develop the language of what that feels like. And you can say, wow, I'm having kind of an off day, but as a kid, that's the only brain you knew up to that point, so you don't know.

Beth O' Hara, FN

And that was decades ago. Today, I would've been labeled ADHD and put on Ritalin.

Jill Crista, ND

That's right, yeah. So it's so different in a kid, and I really encourage parents like listen to the behaviors and be an observer as much as you can, which is frustrating when you're also trying to raise a kid to be a member of society and follow house rules and all of those things, but if it's happening over and over again, really stop and be the observer. If there are other somatic meaning body things that are going on, there's a health issue going on, not necessarily a behavior issue.

Beth O' Hara, FN

Oh, that's so important. That's really important that if you're seeing these other symptoms, don't assume that your kid's just acting out. And a lot of times they just can't help it. At the same time, we don't wanna coddle kids and let them get away with all kinds of things. And that's a hard balance. The parents that come into my practice, and I work with a good number of kids on the spectrum, often they identify on the Asperger's side of things, those parents are so loving and so attentive and they work so hard, and then I see the kids will often also use that as an opportunity



to manipulate or get what they want. So that's a real challenge for parents. Do you have any just thoughts on navigating that part? 'Cause I'm sure you worked through that with your own kids.

Jill Crista, ND

Oh yeah, and how many of us would love to have someone else do things for us? I just think for myself, I continued and I had wonderful support and grandparents around that could continue to help me say, "I think they can do that part for themselves." And so I kept hearing that in my ear and knowing that some days are gonna be good days and some days are bad days, so always giving the child the opportunity to do it themselves, because it gains their self-confidence. So yeah, giving lots of choices, meaning the choice isn't, are you going to eat your carrots or not? It's did you wanna use a fork or a spoon today? The choice is yours.

So giving lots of choices, so that the end goal is meeting what you want, and just knowing that you're gonna have good days and bad days. So just because the child was able to do something the day before, and now they're saying, "I can't do it," it can look like they're kind of faking it and just wanna be taken care of. Like who doesn't wanna be taken care of? But that might just be having a bad day. So check around for body symptoms as well. And then you can be like, okay. And that might be sensitive feet. That might be that my ears won't stop ringing. It could be something like that. If there's something like that going on with the body, then you know that's you're having a bad day. It's time to hit the mast cell support.

Beth O' Hara, FN

So we've been touching on it some. Let's do a deeper dive into. what are the biggest root triggers of mass cell activation syndrome in children?

Jill Crista, ND

The ones that I see is mold is a huge one, and then undiagnosed parasites. Those are really sneaky. And that's where we see more of the IgE tending to be. Whereas with mold, it tends to be in the non IgE kinds of things if they're not exposed to a lot of spores. If they're exposed to a lot of spores that if you can actually see some mold problem, and it's not trapped behind building material, then you'll see then it's really hard to tell the difference between the parasite kid and the mold kid, but mold opens the door to parasites, so that we see that combination pretty frequently.



Beth O' Hara, FN

So that's so interesting about, well, one, we know mold hits kids harder, and I'm just gonna throw out pets there, because I'm a dog lover and I know about people's families. And they'll just mention offhand, "My dog has all these issues." I'm like, "Your dog has mold toxicity too." And my dogs got mold, because they could come with me to my office, and they helped with the clients, and the kids especially loved to play with them, but I had a moldy office before I knew about mold, so they both got it.

Jill Crista, ND

I wondered why in your course... I love in your course that you make sure to bring up pets. So if anyone hasn't taken the course, it's an amazing course, the mold masterclass. And I love that you talk about the pets, and I was like, oh, there's a story there that we haven't talked about yet.

Beth O' Hara, FN

Well, it was twofold. It was that, one, I had a dog before. Her name was Kira, and she came with me. I was in that office for 10 years, and she came with me there. She got bladder cancer at 12, and it was too young. Otherwise her health was really good. She'd never had any health issues at all. So it just seemed out of the blue and strange. I also see how often pets get these chronic illnesses early, and I was learning about all of the mycotoxins in kibble and the quality of the meat used in kibble. So then when I got my next pets, I started them on raw diet, vegetables included in their diet. I mean, I was gonna do everything the best that I could, but I didn't know about the environmental mold. So I took them right into this really moldy office. And one of my dogs was a rescue, had behavioral issues, maybe had trauma, maybe already had mold. Anyway, that's the story. And they're detoxing and they're doing quite well.

Jill Crista, ND

Good.

Beth O' Hara, FN

So they're improving. And it's just my goal that they have a better quality of life and a better lifespan. Coming back to the kids, it's interesting too, that you say parasites, 'cause often with adults, at least in my practice, I find when the mold clears, and sometimes people have acute parasites, there might be Giardia, there might be pinworms or a tapeworm or something like that, but I don't see a whole lot as a big primary issue in the adults, and maybe it's because their



immune system's already fully developed at that stage. What's going on with the children and the parasites?

Jill Crista, ND

I think just to what you're saying, naivety of the immune system, they haven't seen a lot of these things. We eat parasites all the time, which is gonna gross everybody out, but most of them are just travelers through, so they're not necessarily human parasites. They might be a dog parasite, or they might be something else. And our body is designed to burn a lot of them up in our stomach acid. That's why we have a little bag of acid. That's the first thing that food finds, because it helps us digest our food, but it also helps protect us. And so I think with kids, they just don't have that robust stomach acid, and they don't have the training on their immune system. That's why kids get sick more often than adults do. They're learning all of those things. And so when you have a mold situation, or if you have like a congenital situation where either it's due to the environmental toxins or a stealth infection, and now you have a weaker immune system from the get go, from development on, and then maybe they weren't able to be breastfed due to whatever conditions. Now you have a kid that doesn't have moms IgM, which is the protective immunoglobulin, and they're more susceptible to taking those on.

Beth O' Hara, FN

And just as a little side for people, side tangent, there's some really fascinating research coming out about there are some beneficial parasites that help modulate the immune system. So we have to start looking at like we do bacteria that we don't need to be sterile, but what are the actual species? And we don't wanna wipe everything out, because there were some studies showing that with certain species, if they were wiped out, children developed autoimmunity afterwards. So that's where the knowing what that organism is is important.

Jill Crista, ND

Yeah, we've seen some interesting turnarounds with autism using purposeful parasites, using-

Beth O' Hara, FN

Like the helminth therapy?



Jill Crista, ND

Yep, but they have to be ready. On the mast cell spectrum, you have to have all that quiet and calm, and we're now just down to the gut brain elevator not working right. And then sometimes something like that that's really provoking will get those systems working again, and we see brain changes.

Beth O' Hara, FN

Well, let's talk about some of your favorite ways to address mast cell activation in children. And how do you work on getting that calming?

Jill Crista, ND

Yeah, kids need... Getting a capsule in a kid is a little challenging when you're working with a three year old, and sometimes yucky herbs is a little challenging as well. I really love your course, the supplements, your top eight supplements for mast cell. Those are all things that I use in adults. But when we get to kids, it gets a little more difficult, 'cause you don't have... To get baicalensis into a child is very bitter, and it's a little tricky to do. We can do it in a glycerate form, but we need to mix it with things that also will calm down mast cells. So, the things that I see in kids, especially these days, kids eating the diet that they're eating and now being exposed to coronavirus, which chews up vitamin C like there's no tomorrow is massive amounts of vitamin C deficiency. I'm seeing a ton of vitamin C deficiency to the point where we're actually seeing like a mild scurvy picture in kids.

Beth O' Hara, FN

Yeah, I'm seeing them get it as easy bruising, weird gum stuff.

Jill Crista, ND

Yep, and so I'm thinking, wow. So I found some research that showed that one day of the common cold, which is another coronavirus, that's the non-adapted one or the more adapted one. that will chew up 23 grams of vitamin C in one day in an adult, 23,000 milligrams.

Beth O' Hara, FN

That's a lot.



Jill Crista, ND

That's a lot of vitamin C.

Beth O' Hara, FN

I was just gonna say that, again, that's 23,000 milligrams.

Jill Crista, ND

Right, so for those of you that like Emergen-C, has 1,000 milligrams. So that's 23 Emergen-Cs that you could take and your body would be able to use up that. And I'm not saying taking Emergen-Cs, 'cause that has other nutrients in it. But just to give you an idea of something people are familiar with. So I'm assuming this coronavirus is chewing up vitamin C at the same rate and pace. And our body has an amazing ability to increase our receptors for vitamin C when we need it. And then if you don't need it, it just flushes it out with diarrhea. So I've been using the... I don't go to bowel tolerance. There's this test that Dr. Jaffe created, which is a functional test called the bowel tolerance test. If you are gonna do that as an adult, I do recommend using his vitamin C, because it's what is standardized and calibrated for that test. I don't do that with kids, but we do push the doses a little bit. The child might get a stomach ache if we're just using vitamin C as ascorbic acid. So I like to mix it with bioflavonoids.

We will use either rosehips. Rosehips are very, very high in vitamin C. I brought, show and tell, here's a rosehip, and you can make tea out of it. You can grind it up in a smoothie. They are a wonderful, easy thing to add to food. And there's also a solid extract from Wise Woman, which I just love. It's very tasty. Kids can take it like a syrup, and it will have vitamin C and bioflavonoids. So typically what I'm doing is I'm mixing a vitamin C supplement. A lot of the chewables have tons of sugars and tons of additives. So we try to just do like as clean of an ascorbic acid powder as you can find, and then this rosehip solid extract, and then adding rosehips to anything you can sneak 'em into, anything. Like sneak 'em in everywhere, 'cause they're very high in vitamin C, and they're gonna help your child. Vitamin C stabilizes mast cells. So it doesn't help with reducing the recruitment of them, but it will keep them from degranulating or spilling more so than if you're vitamin C deficient. So that's one of 'em I'm seeing.

Beth O' Hara, FN

I love this whole food option, this food-based, plant-based option, 'cause it's gonna have that full spectrum with those bioflavonoids you're talking about. There's also in the whole food vitamin C



as opposed to the synthetic a copper compound that's important to making DAO. So that can support through another mechanism to break down that histamine. And I find some kids and adults are sensitive to ascorbic acid, 'cause it comes from fermentation. That gives them a whole other way to access that. Do you ever use camu camu? It's a little bit, but it can be hidden.

Jill Crista, ND

Yep, camu camu, acerola. There are lots of these, good old cranberries. Cranberries are high in vitamin C and people forget about that black currants. So a lot of those, you can use it through food. Typically if a child has mold and mast cell activation and they've had a coronavirus exposure, they're gonna need some supplementation in my experience, especially if they're starting to show that like subclinical scurvy kinda look, then we need to really pump it up. Just pumping oranges, that's not gonna really help. We need some more whole food things that aren't gonna be agitating the mast cells as well.

Beth O' Hara, FN

Just because citrus can be a histamine liberator. And how many oranges are you gonna have to get to get into higher doses? I mean, you're not getting a whole lot. Maybe I think 90 milligrams that comes to mind. I don't know if that's correct.

Jill Crista, ND

Right, well, I mean primates eat the whole thing. They eat the peel. That's how you get the bioflavonoids, and that's how you get all the things that support. So, some kids will do that like with a kumquat. That's kind of fun. Like can you eat it and not make a sour face? Make a game out of it. But if you do have a kid that suddenly goes on those little tangerines, Cuties, or whatever, if they go on a binger and they just keep eating it and keep eating it, that's your cue, especially if they ever are having gum irritation or easy bruising, my child is needing some vitamin C. And get going on that. We don't store it. That is the one of the few nutrients we must get dietarily. So, if we're chewing up 23,000 milligrams in one day of coronavirus, we're gonna definitely be in a deficiency. The body will have to pull that from non-essential tissues, which are essential, but not for the moment of killing a virus.

Beth O' Hara, FN

I love that you're bringing this up too about watching what kids are gravitating towards, what they're drawn towards, not the processed sugary stuff. But naturally, because if we lived out in



the wild like we did for the majority of the history of humanity, that's what animals do is we gravitate towards what we need at that point in time. There's a real innate wisdom in knowing what to select, but once we separate from that, and it's like, well, you just have these options right here in this kitchen, we've lost connection to that.

Jill Crista, ND

Right, and it just happens to be the things that we thought to buy when we were at the grocery store. The other thing I'm seeing... Oh, sorry, go ahead.

Beth O' Hara, FN

I was just saying that also maybe brings in giving kids some choices in the produce section, so they can start to choose things that they're gravitating towards.

Jill Crista, ND

Yeah, and it's a fun game in the vegetable aisle. And since corona, it's not as popular, but go and pick something up and smell it. What does it smell like? Does it smell like something you might want to eat? Kids will eat peppers, bell peppers, the red and the yellow, and that kind of thing after they get to smell it. But at first they would just look at it like I don't think I'm gonna eat that. And you put a little dip on anything, it can go down.

Beth O' Hara, FN

So we've got vitamin C. What are some of your other favorite ones for mast cell activation?

Jill Crista, ND

So plants, my number one favorite herb is nettles. Nettles has three different mechanisms for stabilizing mast cells and reducing mast cell, not just the activation, but the total recruitment of mast cells, and that one can be really easily done. It's also a food, it's a food green, and there are cultures that eat nettles as part of their... It wouldn't be a salad, 'cause it does have stinging. So if you are going out into the woods and you're harvesting your own, I have a video on my website called "Nettles from the Wild." So I can show you how to do that. Definitely wear gloves, 'cause it has a sting. But once you steam it, all of that formic acid goes away. So like two to three minutes in boiling water, you then have a nourishing green, very high in minerals and also a complete mast cell helper. And for kids, they don't tend to love cooked greens. I was gonna say slimy greens. They don't get slimy like spinach, but it's a cooked green. So a lot of times parents will be



pureeing that into spaghetti sauce, and then just put that in the fridge, and that kid didn't see you do it. You do it when they're distracted. And then when it's time to have spaghetti, you're just pulling the spaghetti sauce out and you're using, of course, for leftovers, you wanna probably freeze it. A lot of my parents will make this when it's nettle season, stick it in the freezer right away, and then you have nettleized spaghetti sauce or whatever it is that your child will be able to eat. And you can hide 'em in there. They don't have a really strong flavor. So it's a nice way to hide food. The easiest way, though, is to make nettles lemonade.

So you just take nettles. I have some here, and I just love to show the plants. They're just super green and beautiful. You can make a nettle tea, and then mix with a concentrate lemon juice. And it makes a like a greenish lemonade that tastes fantastic. So this is something that a lot of families will do, especially to stop bug bite stings. If the kid gets one mosquito bite and their whole body goes off, that will help reduce the itch. It helps reduce all of the mast cell symptoms. So those are easy things you can kind of have in the fridge. Like if you're gonna have some juice, throw some nettle tea in there and make a good concentrated tea. So again, how to make that is on my website if anybody wants that recipe.

Beth O' Hara, FN

Nice. And then they can with things like monk fruit or stevia, so we can stay out of the sugar.

Jill Crista, ND

Yeah, absolutely. And that's where it's nice to use that concentrate lemon, because it's spent less time getting histaminic, sitting, waiting to be made into some kind of processed juice. They process it, they freeze it. Frozen food tends to be pretty well tolerated from the kids in my practice. So that's a way for parents, and also you can thought, make it ahead of time, and freeze it into ice cubes or however you wanna make it, so that it's easy when you need it, even in the wintertime. Also mint, mint is a mast cell stabilizer and a antihistamine. So that might be some way that you can add flavorings to something like a *Scutellaria baicalensis*. If you're using that little bit of glycerate, I tend to add a little bit of mint to that, so that we can try to mask that bitter flavor of the Baikal.

Beth O' Hara, FN

Yeah, the Chinese skullcap extract.



Jill Crista, ND

Yeah, Chinese skullcap, thank you. I forget to say.

Beth O' Hara, FN

I'm just letting people know who don't know the Latin.

Jill Crista, ND

Yeah, that's a big word. It's like bilingual for me, I forget to say it in the normal person way. Also perilla, but that's harder to find in a way for kids to get. I made my own and then I found someone now that's making glycerate. So that's a nice, easy way to get it in. Glycerates pull out all the extracts that you need to have the mass cell stabilizing effect with perilla. Yeah, I'm just trying to think of all my plant buddies. And then onion.

Beth O' Hara, FN

You can grow perilla too. So I have a medicinal garden and I grow perilla, and I grow the Chinese skullcap and all of these various things and then I make them into tea. We were just talking before that I have my medicinal tea here that I just went and picked out my garden.

Jill Crista, ND

I'm so jealous of that tea. That's amazing. That sounds so good.

Beth O' Hara, FN

I'll make you some.

Jill Crista, ND

Okay, thank you. Also nutrient wise, vitamin E. I'm seeing that a lot of kids, especially if they've been sick from mold, they just don't take in those good fats like they should, because the mold mycotoxins will impede fat soluble absorption. So I know on your eight supplements, you have vitamin A and vitamin D, definitely high on my list, but I would also add vitamin E, because it is a mast cell stabilizer. It reduces histamine. It also reduces IgE. So if it is one of those allergies for parasite kind of stimulations of the mast cell problem, vitamin E can shut that down. And there are nice liquid ones that you can use. You wanna use a tocotrienol form if people are looking, and Designs for Health has a nice liquid. Really, really palatable with kids. I tend to mix that with borage oil. Borage is in the family of the plants. It has a lot of rosmarinic acid, which you talk



about in your course. Borage oil has some mast cell, I don't wanna say stabilizing, but it manages what the mast cells have just degranulated, helps you calm those down. So when combining the E with the borage oil, Nordic Naturals has a nice liquid borage, so you can just make a little concoction. And I have parents that are bringing me all kinds of cool recipes of smoothies that they make with these. They throw on the rosehips, they throw on the nettles, and make these whole smoothies. And the that's just what they do in the morning or before meals, that kind of thing.

Beth O' Hara, FN

I'm getting these great creative ideas. One of the things that draws me to you is your knowledge of the botanical and the food-based stuff. And so I'm thinking, well, we can make a smoothie. and we can throw on passion fruit, because that has mast cell stabilizing properties.

Jill Crista, ND

That's good idea. I'm actually gonna share that with a patient.

Beth O' Hara, FN

And then I was thinking we've got blueberries, we've got quercetin and apples. And I love making like a fresh apple sauce just in... If you have a Blendtec or Vitamix, you just throw them in there and you have fresh, raw apple sauce, and then you can hide all kinds of stuff in there.

Jill Crista, ND

Yeah, and if your kid tends toward constipation, that'll help, the malic acid, it's fantastic. And it doesn't always have to be sweet. Like onions, a lot of the kids that I work with that have been mold sick that have mast cell issues, crave onions. You would think, oh, kid's not gonna, they always have to go sweet, and that goes into my whole thing like how to get herbs into kids. Don't always be thinking of sweeten it. So onion soup with a little bit of beef stock or beef broth, if you're trying to manage the collagen part, just the stock, that is so well tolerated by kids, something they ask for. A lot of these kids have some adrenal deficiencies, so they like the salt in that. It makes them feel better, stabilizes their blood pressure. So onions are just a great, easy way to get that all that quercetin in there, and you're doing it in a really nourishing way.



Beth O' Hara, FN

And I'd love to make stock with red onion skins. They're super high in quercetin, particularly papery part that we tend to peel off, and we can drop that into the stock and strain it out. So for parents who are trying to jot all this down, I have links to these products

Jill Crista, ND

Good, thank you.

Beth O' Hara, FN

On our mastcell360/summit. That's our summit resources page. and everything that we're talking about here, I'll have linked for you if you're looking for these.

Jill Crista, ND

Yeah, that's a good point, 'cause like the, how do I do it? Another plant is hops, which doesn't mean feed your kid beer, but hops, you can make in a tea. It's really stinky in a tea, so it's not a very easy way to get it into kids. So I usually . Yeah, I use the glycerate with a little bit of mint, and that's a nice, easy way to get it in. Propolis also, it just popped into my head. Propolis is also a really great antihistaminic. I don't know if it does anything on the rest of the degranulation, the leukotrienes and things like that, but it would make sense that it does, because we use it in intranasally for hyperreactivity, hypersensitivity, that kind of thing. So you can use that with a kid orally, so by mouth, but you can also use it in the nose. If they're too little to be spraying things up their nose, you can just take a little Q-tip. If they tend to be this kid, that are always at their face, you can just take a swab and swab the nostrils, especially before meals, because, again, you're gonna get that whole histamine thing.

Beth O' Hara, FN

I was thinking, too, they could use a throat spray if it's antihistaminic.

Jill Crista, ND

Yeah's Beekeeper's Naturals has a great throat spray. It's really very tasty, very palatable. It's nice for the kids that get that eating reaction. So you have to do something before they eat. That's great. Sorry, I cut you off.



Beth O' Hara, FN

No, we'll start talking about that. I'm so excited talking about this eating reaction. Let's talk about something else I've learned from you, which is the gotu kola.

Jill Crista, ND

Yeah, yeah, gotu kola is fantastic for reducing leaky brain we might say or the microglia, which is the immune cells that are resident in the brain. You can use a little bit of gotu kola tea before meals. It crosses the blood brain barrier between five and 15 minutes. So that can be part of like your pre meal routine is drinking some gotu kola tea, then do your propolis spray, and maybe propolis in the nose, and then take some vitamin E kind of get ready for the reaction. And what it's found to do is to reduce LPS, which is an endotoxin. It reduces the LPS stimulation of the microglia. I haven't found research yet, 'cause I just don't think it's done on whether it is reducing also then mast cells in the limbic system. That's a very specific study. I hope someone's gonna do that. But the fact that it's reducing LPS stimulation of the microglia, we see that a lot of things that stimulate microglia stimulate mast cells. So, that for me, I think is also probably having a mast cell reaction in the brain, but I don't have study to prove it.

Beth O' Hara, FN

But it's so important in terms of just thinking about some of the behavioral symptoms, the hypersensitivities, the kids with anxiety, kids with sleep issues, any of these types of nervous system related. And I always have, I'm gonna show my... I'm from the South, so we drink outta jars, and I always have herbal teas. So, I make them up. They're fine in the fridge for a couple days, and I sip on them all day long, and I'll rotate the herbs based on what I need. And I sweeten it with Stevia, so it's enjoyable and I get it down. It helps me get more fluids in, but it's a way for kids also to keep them off of the sodas, keep 'em off of the sugary juices, and to get these medicinal qualities in there.

Jill Crista, ND

Yeah, absolutely. You know, herbal teas can be really tasty. Hibiscus is a lovely tea. It's high in bioflavonoids, and I have parents that will mix it with a little bit of bubbly water. So it's like they're getting a treat every time that they are drinking something. They're getting their own spritzer. So you can make it fun. It doesn't have to be boring. One of my teachers teaches how to make these herbal foams like elderberry foam. And so you can put the foam on top, and they can have



like a mocktail, and the whole time you're like, I just gave you your medicine, okay. There's no complaining. So yeah, you can have some fun with it.

Beth O' Hara, FN

Yeah, and that's important too, because I've seen a number of children who have come into my practice and they've had chronic Lyme. They're only four, five, six years old. They're already having to swallow all kinds of things. They know they're different from their friends. And there's this medical trauma that starts to develop from just all of that messing and having to do things that are unpleasant, and that's where this comes into play in terms of, how do you make it fun? How do you make it enjoyable, and maybe even teach them about the plants, so they can learn about different plants? And I remember one of my favorite things growing up was my mother teaching me about different plants in the garden and what we were growing and what was it for? And so whether you're getting it from the grocery or you're getting it as a tincture or you're able to grow it.

Jill Crista, ND

I'm so glad that you brought that up, because this is gonna go into a little bit of the woo side of it, but when you have a relationship with those plants, you're getting something from that. You don't have to always ingest a plant to get the medicine from the plant. Good medicine is also being with the plant, smelling the plant like eucalyptus. Eucalyptus is an antihistaminic when you inhale the essential oil. So again, if you're one of those kids that always doing this kind of thing or itchy eyes, whatever, there are lots of plants like holy basil, like perilla, which is a basil, they're having a smell experience with it, which is administering molecules from that plant, which are affecting the brain. And when the brain is so affected in kids with mast cell activation, that seems like a really smart way to get it in. So having them go and be, have experience with the plants, if you can, and you don't have to have a big yard. You can grow these. These basil grow in a pot in your house. So if you have one sunny window, you can create a remedy garden.

Beth O' Hara, FN

And that brings us back to some of our feeling safe in our bodies. And I talk a lot with our clients about how we've lost in our culture this connection with the Earth, with our feet on the Earth. And we we've had a very short period of time that we've lived in these houses with sub floors and carpeted floors, and we've worn these rubber soled shoes. The vast majority of our time on the planet, we've had feet on the ground, connection with the animals, connection with the plants.



And then another angle of what you're talking about, a lot of essential oil research is done on essential oils and the inhalation and the effects on the limbic system. So just that can be calming and have a huge healing response.

Jill Crista, ND

Yeah, it's super fun to have some of these stinky plants that smell good in your house. And when you walk by just, and they like it. I think the plants love it. They get a tickle and you get a good smell.

Beth O' Hara, FN

And it's fun for kids. They like to explore things. Anything else really important that you wanna make sure that we cover?

Jill Crista, ND

I don't think so. I mean, I just really appreciate that we talked about in the beginning, pay attention to your child, and they're giving you clues and hints through their behavior and through their symptoms of what they're needing at the time. And if you have a doctor who isn't on board with all of this, find someone who does have education in it, because I think that there can be some things just like in the PANDAS PANS world, there can be things that you're thinking, like collagen, like I get that a lot, "Oh, we put 'em on a collage powder," "'cause the hypermobility," and the hypermobility was because of the mold. And now we have histamine problems, and it was from the supplementing, not even something that the child was at that point with mast cell. It was just we added something without really understanding all of the mechanisms.

Beth O' Hara, FN

And glutamate, high in glutamate. So you get these kids that are hyper-

Jill Crista, ND

Yeah, you just . You just amp it up. So I think your website is amazing. I highly highly encourage people to take your courses if you have a child with this, and then just modifying some of the things. The principles are all the same, but the tools that I talked about today are just more like kid-friendly. It makes it easier to get 'em in.



Beth O' Hara, FN

And tell people how they can find you. And you have some things coming up for kids as well.

Jill Crista, ND

Yeah, so I have a mold in kids course. The book that I put out is pretty much all about things adults can do. But then I get the question of, well, is this safe for kids? And if so, how do I do it? And if not, what should we do instead? So it gives people tools. And I have my book coming out the end of summer on PANDAS and PANS.

Beth O' Hara, FN

So that should be already out when people are watching this. And so do take a look at Jill Crista's work. It's amazing. I learned so much, and I have huge depth of gratitude for what you do and all that you put out. Thank you so much for your service.

Jill Crista, ND

You too, honey, yeah.