Reversing Chronic GI Issues In MCAS And Histamine Intolerance

Beth O' Hara, FN With
Jill Carnahan, MD

Beth O' Hara, FN
Welcome back to this episode of the Reversing Mast Cell Activation and Histamine Intolerance Summit. I'm your host, Beth O-Hara, of Mast Cell 360 and I'm so happy today to have my colleague and friend, Jill Carnahan, with us and she's gonna share with us some really in-depth information about bowel issues, GI issues and mast cells. And I think we're gonna get some great clinical pearls here. And I just wanna welcome you and thank you so much for being with us today.

Jill Carnahan, MD
Thank you, Beth. I'm delighted to be here and as I mentioned before, but for the world to hear, I love the work you're doing and just so excited to be on your summit.

Beth O' Hara, FN
Thank you, and vice versa. I love partnering with you. I wanna tell people a little bit about your background and then have you share some of your story with us. But for you all that you know most of you probably know who Dr. Jill Carnahan is, but she was dually board-certified in family medicine 2006 to 2016, and also in integrated holistic medicine since 2005. She runs Flatiron Functional Medicine in Denver, Colorado. And this is a widely sought-after medical practice. People come from all over the country. People come from internationally, they have a lot of different types of clinical services, nutritional consultations, chiropractic, naturopathic medicine, acupuncture and massage. But Dr. Jill's also a survivor herself of both breast cancer and Crohn's disease. And this is where her passion comes from in teaching patients how to live well and thrive with complex and chronic illness. And her website and her interviews, if you guys haven't checked those out on Facebook and YouTube, they're just an amazing resource of information

for people searching for answers. I love to go there and find new information and listen to those interviews. So I can encourage you to do that. And one of the things I always love talking to you, in talking to you is that our stories have a lot in common. And I just love that if you could share with our listeners some of your health story. Just a beautiful illustration of how persistence can turn into recovery in a wonderful message of hope. Can you kick us off there?

Jill Carnahan, MD
I would love to, Beth. I always love the story and I know you feel the same way, because what happens is we go through suffering and some really difficult things. But it gives meaning and purpose if we can turn that into knowledge and resources and then turn around and help hundreds and thousands of people through our own experience. And I've learned over my lifetime that I learned very well through experience unfortunately. So, the divine has given me a lot of experiences to learn through. So for me, it started I was in medical school and I actually chose to go to Allopathic Medical School, despite being, I always say, I have the heart of a naturopath, because I really grew up with organic food from a farm. And my mom was a nurse and took care of us mostly at home when she could with herbs and things.

So I grew up with a very holistic like childhood, but what I realized was our medical system is still fairly well reimbursed and kind of the standard. And I wanted to go into that medicine just so that I could make a change and actually shift the way things are done. And I've been just grateful for that background, because I feel like what we need, all of us working together is to continue to push the envelope and shift things to get patients help and to find root cause. So that's the background. I'm in medical school, 25 years old in my third year and I found a lump in my breast and shortly thereafter was diagnosed with a very aggressive form, as you can imagine, in my twenties of breast cancer. So that just completely shocked me.

What I did later was look into some of the root cause and I grew up on a farm with lots of toxic chemicals and pesticides probably in the well water. And then I have all kinds of genetic snips for detox that are not optimized. And so, I think some of the toxic load led to that DNA disruption in cancer in an early age. And I did went ahead and had conventional three drug chemotherapy. It destroyed my gut, which is part of my story later on. And then I had radiation, I had surgery and I got through that and I was just out of my treatment, went back to my medical rotations and within about six months I started having weight loss, diarrhea, abdominal pain, and shortly thereafter diagnosed with Crohn's disease. Now, some of you might be like, oh my gosh, that's

terrible luck. But the truth is, with my genetics and my gut microbiome, which probably wasn't healthy prior to that to begin with, and an undiagnosed case of celiac disease, this was kind of a setup, because the drugs that are used for chemotherapy definitely increase intestinal permeability. And for someone with Crohn's disease like myself, one of the genetic factors there is that we have an abnormally aggressive response to a normal microbiome. So with this insult of, and we'll go into some of the detail today, but the leaky gut made worse by the chemotherapy. And then an underlying celiac where I was eating gluten, not knowing it creating more inflammation, just led to the perfect storm for the development of inflammatory bowel disease. And I share all that because now almost 20 years later, I'm completely cured of Crohn's disease, which I was told was incurable. And it's all because of the stuff I learned along the way for the gut in treating the overgrowth of bacteria and yeast or parasites or taking out gluten and changing the diet and changing the microbiome. So a lot of that really led to my passions first for the gut and then for environmental toxic load and what I do today, which is looking for root cause of all of these things.

Beth O' Hara, FN
And thank goodness that you had that holistic background to draw on. Oh my gosh, at such a young age just dealing with those things and it really breaks my heart and I know from my own story how hard it is to be that young and facing these things and trying to navigate them. And it takes a lot of perseverance. And I've found that people who get through these things are the ones that keep putting one foot in front of the other. What kept you going through that time? What kept you not giving up? 'Cause so many people give up.

Jill Carnahan, MD
I love that you're talking about this, 'cause I think this is maybe one of the most important things we give your listeners the sense of, I always feel like I'm a great scientist, but I also had faith that I took this thing that people think are dichotomous, which is faith and science. And I had both to a great degree. I tried to find the best research and use science and find answers, but I also held onto this faith that number one, there's a purpose and meaning in everything that happens to us. So there was never a time where, I mean granted we all kind of say the why me thing, but I never got stuck there. I never got stuck in the, Oh, woe is me, why me? And it's easy to go there. It's okay if you're there, there's nothing wrong with that. But if you go down there, you come right back up and say, okay, what can I learn from this experience there has to be lessons? So I found that the biggest important thing that was every single experience has something to teach

us. And when we go about it that way, we learn these great insights and wisdoms and I know both you and I have insights and wisdom that we would never have from medical school or textbooks, because the experience teaches us things about the symptoms, about the process, about the journey and about the causes, the root causes, that we can only really gain from experience. So, the number one thing that kept me there was this combination of faith and that there was a meaning of purpose and science. Like we dig in deep and finding answers.

Beth O' Hara, FN
I'd say my, you know, mine was so similar, because I was digging into everything I get my hands on and this was when functional medicine was still really new and every textbook I could find. But I just, no matter how hard it was or how many walls I hit, I knew in my bones, I mean just to my very core, there were answers and if I kept searching, I knew it was out there. I didn't know for certain that I was gonna find it. I knew it was there and that kept me digging and I really like that combination of that faith, however that shows up for somebody. And then the science side of it. So we're gonna dive into this role of mast cells in these different kinds of GI disorders. And GI issues are so common, whether it's diagnosed as some kind of inflammatory bowel disorder or we've got things like colitis, we've got ulcerative colitis, we've got Crohn's, IBS, or even just people having a lot of abdominal discomfort, pain, constipation, diarrhea. What are the links with the mast cells and these kinds of inflammatory gut problems?

Jill Carnahan, MD
Yeah, so the first thing is, there's a large amount of mast cells in our skin and in our gut. And I don't know the statistic so I won't quote for sure, but I'm guessing those are the two most dense areas for mast cells. So in our gut we have a lot of these mast cells, which respond to many triggers. Again, as your whole summit is about toxins and infections and heat and cold and allergens and et cetera. And even the microbes can be triggers to these mast cells. So because there's such a large amount of mast cells in the gut, we can have a predominance of symptoms from histamine and mast cells that happen in our gut. One of the ones that kind of surprise me that I see often in mold and people don't connect is heartburn. So often that increased histamine will cause heartburn in people. And that's a sign to me that there could be excess histamine among other things as well. And the same thing as I mentioned in my story, histamine will increase permeability. And so, what often happens as well is there's a massive increase in leaky gut or intestinal hyperpermeability and this leads to the translocation of those

bacterial coatings. Or if there's excess fungi like yeast into the immune system, into the bloodstream and often triggers an even more exaggerated response. That mast cell, so that leaky gut is made worse, symptoms are made worse. And things like diarrhea or constipation, heartburn as I mentioned, increased intestinal permeability and that increased intestinal permeability not only leads to an increased toxic load through the bloodstream on the liver, but also development of more food allergies. Because you're having more permeability and more food androgens that leak into the blood.

Beth O' Hara, FN
And that makes so more so much sense in terms of how mast cell activation isn't autoimmune necessarily. And it doesn't mean somebody's gonna develop autoimmunity, but there's a really close link with all the forms of autoimmunity been studied with it. And we know that mast cell activation syndromes where that TH2 response that opens us up to TH17, but you're bringing this additional factor of mast cells are gonna produce more inflammatory mediators including histamine, more leaky gut, more things getting exposed to the immune system.

Jill Carnahan, MD
Yeah, so this makes so much sense, because basically, mast cell activation increases permeability. And we know from Dr. Fasano's research when he first published in 2012 that there's a triad of auto immunity that always happens. And that is the first of all the genetics, there's a genetic link and not everybody has that. Some people have it and it's not something we can change a whole lot. And then there's often an environmental trigger and that could be foods or that could be toxins or infections or some other thing for example, in the case of celiac disease, that gluten over time is the environmental trigger that will take someone from being prone to celiac genetically into full-blown celiac disease over time.

And that's that environmental trigger. And the third thing is what you touched on and that's the gut immune interface. That's this link between our outside world and our inside world. So if you think of the gut like a tube from the mouth all the way to the anus, that is our interface with the environment outside. And this on that lining, which is called enterocytes, the cells that line the gut and those permeable membranes sometimes between them. Little tight junctions and the zonulin, if they open up, I always call it like Swiss cheese for guts. You have these holes in permeability. When that happens, all of a sudden you're dumping more antigens into the blood. And this barrier, this immune bloodstream gut barrier, is where autoimmune disease starts. So

that's why it's relevant, because if you have a mast cell activation, a histamine trigger, something that happens, which increases the permeability, all of a sudden you're having a lot more interaction between the gut immune interface and that can lead to autoimmune disease development.

Beth O' Hara, FN
So then there's also gonna be this link with histamine intolerance and I know that's another area that you look at as well. Can we talk about that side of it? So, we've got some interviews on how mast cell activation histamine tolerance are different if people aren't familiar with that part. Let's dive into specifically that role of histamine intolerance in these types of gut disorders.

Jill Carnahan, MD
Yeah, so there's a couple things that can play in here. Years and years ago I had no idea what a low histamine diet was, but I knew those foods like bone broth or fermented anything or aged meats and cheeses or leftovers or even avocados, they would bother me. And again, I had no idea what the reason was back then, but now I know, oh, of course, I did better on a low histamine diet. So a couple of things. The gut microbiome and the composition can lead to excess histamine in and of itself. So there's certain species. Typically, the ones that are sistiobasibo like enterococcus, E. coli, Klebsiella and even certain strains of lactobacillus that could be more histamine producing or fermenting, which also creates more histamine inside the gut, regardless of what you eat.

And then often candida yeast species and mold, whether you're colonized or exposed. And often with the mold exposure, because of that weakened immune system, you'll get excess overgrowth of yeast, which is opportunistic due to that weakened immune system. So this plethora of things that can happen in the dysbiosis or shift in the gut microbiome can lead to more histamine. And then there's multiple factors, whether you can't break down histamine or you're producing too much or you don't have DAO enzyme, all of these things can lead to excess histamine. And the gut I really feel like is one of our biggest reservoirs for that histamine. And then that can create histamine intolerance, rashes, symptoms, congestion, et cetera. And also the need for a lower histamine diet.

Beth O' Hara, FN
Yeah, and I found this for myself 'cause when I jumped into shifting my foods and I started with, I knew I had really terrible hypoglycemia. And so I started there and then I went into the Weston A. Price movement and that's a wonderful movement in terms of eating the way we used to eat, eating whole foods and all of that. But there were a lot of ferments and I'm somebody who jumps in 150% for better or for worse. So my kitchen looked like a little laboratory with my ferments and my kefir

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
and all this stuff, but I was getting way more itchy, I was getting a lot more diarrhea, acid reflux, rashes, sleep issues and all of this. So that was a game changer, start to shift the histamine. What kind of role does that have particularly in things like Crohn's and IBS and other types of bowel issues?

Jill Carnahan, MD
Yeah, so my story was I was diagnosed with Crohn's 6 months after I finished all the therapy for cancer. I didn't have a clue, I was in medical school, but as we well know, traditional medical school does not teach you much about the diet or immune system or development of autoimmunity or functional medicine. So I really didn't know a lot. And I remember I've told this before by my gastroenterologist on my first visit after I was diagnosed and I had lots of questions. He said, Jill, you're gonna have this lifelong. You're gonna probably need immune-modulating drugs. You may need surgery, it's incurable.

And my question before I left was, does diet have anything to do with it? Is there anything I can do in my diet? And he looked at me point blank and said, Jill, diet has nothing to do with Crohn's disease. Now what's funny is a research even in conventional literature since then has proved that wrong 100%. But this was back to my intuition and kind of trusting myself and I thought, gosh, that doesn't make sense. I don't know much, but I'm gonna find the answer because that does not make sense. And shortly after I came across, Elaine Gottschall's Specific Carbohydrate Diet and her work with that, she actually worked with a pediatrician from the 1920s. I don't remember his name, but he's the originator of the Specific Carbohydrate Diet. And her daughter

who had ulcerative colitis was healed by that diet. So she knew there was power and she started writing about it and she's the one who made it kind of famous. And similar to Weston Price, there are some fermented things in both GAPS and SCD diet. But what I found in my own experimentation was getting that lower histamine and getting low sugar and of course gluten free, because I was undiagnosed celiac. So dairy free, gluten free, low sugar, low histamine, those were the big things along with kind of a modified SCD diet, they transformed my Crohn's symptoms. And so I knew within just two weeks I had no bleeding, no pain. Now I wasn't cured in two weeks, but I had enough of a change with the dietary changes that I thought there is something going on here. And now we've proven since then that all of these things do play into inflammatory bowel disease, because that histamine will continue the vicious cycle of permeability. And as long as you have permeability, whether it's IBS or Crohn's disease or colitis, you're going to have some symptoms and issues and you're gonna be more prone to develop autoimmune disease.

Beth O' Hara, FN
And we get into these snowball events so that excess histamine is triggering those mast cells. Those mast cells are triggering, they're releasing more histamine, other inflammatory mediators, the inflammation's reducing the DAO production in the small intestine. So we can't break down as much histamine so.

Jill Carnahan, MD
Yes.

Beth O' Hara, FN
It just goes around and round. And you talked about environmental toxins. Can you talk about the role more of that and things like glyphosate, organophosphates?

Jill Carnahan, MD
Yeah, this is huge. And again, we don't think about it directly affecting our gut, but it may affect our gut more than anything. So we have the classes of like pesticides, herbicides, typical organophosphates like atrazine and some of the other chemicals that are used to control either weeds or pests on the field. Those have a massive endocrine disrupting effect, but they also have an effect on the microbiome. And what we're seeing, it's interesting, my family still has a farm in Illinois, my brother's an expert. Kind of a functional medicine expert of the soil. So we always talk

about these things and those kinds of things, especially herbicides and especially glyphosate, actually change the composition of the soil. And so what we're seeing is the plants that are grown in these soils with chemicals are being altered as well in their mineral content and in their microbiome content. And so it's affecting our microbiome. And I always say, 20 years what we see happening to the soils we're gonna see happening to our microbiome, because those are reflecting one another as we eat the crops from the soils that have been changed. Their composition has changed because of these chemicals, but those chemicals also have a direct effect on our ability. For example, glyphosate was originally a mineral chelator.

So what that means is that blocks chelation of minerals, it basically holds onto the mineral so the plant cannot get those and therefore it kills the plant. The same thing if we absorb glyphosate into our system, it prevents us from absorbing minerals and a lot of those minerals feed our microbiome. So what we see with glyphosate exposure is this excessive overgrowth of things like clostridia, which can be a problem and the die off of things that are really helpful like lactobacillus and bifidobacteria. We see in animal studies, like the cows are getting the equivalent of ulcerative colitis in humans when they eat the glyphosate-rich feed. 'cause most of the feed that is fed to animals is been sprayed with glyphosate. And then the hogs and the hog farmers are having this bleeding out like a gastritis also from the glyphosate. So there's these really severe manifestations in animals, can you imagine with the humans? And I always think it's so interesting, because when the company that developed Roundup and glyphosate did studies on cells, it said, oh, there's no effect on human cells. What they did not study was the effect on the microbiome. And that is profound. And because it affects the microbiome, it dramatically can alter our health.

Beth O' Hara, FN
Wow, that's a great piece of information, because we know that Petri dish studies and cell studies don't always translate

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
to organism studies. And I find too that so I run my chemical toxin panels, I know you do too and I find these chemicals and in a lot of our clients and they're either getting conventional produce,

but it's in the water supply. So people think they've got a decent water filter and we're finding like, nope, that's not getting enough out. And then people also many times think that, well, just because an insecticides being sprayed on the outside of their house that it's okay 'cause it's not being sprayed inside. But what are you seeing there?

Jill Carnahan, MD
Oh goodness, and I guess I see people who been just like you who've been everywhere and tried everything and oh, I have several cases, probably a dozen where a young. One case in particular I can think of where a college kid was in an apartment and she had some roaches or ants or some sort of pest and the landlord called someone to come in and spray this chemical. And this chemical on the white paper data was said to be only sprayed every three months. They sprayed for six days in a row, her food was ON the countertops, her waters supply, she became so ill, she's literally disabled. Now that was just one of those things, just like in me in my case there's all of these factors and one thing can take you over the edge. But she really, really was affected by that insecticide and those are neurotoxin and so they can affect the nervous system and the signaling of cells, especially insecticides, because how they act is actually triggering the nervous system of the insect to go haywire and the insect dies.

So these are really big deals. And again, even like you said, so for example, years ago when I first learned about glyphosate, I thought well I'm gonna test myself. And back then there wasn't a lot of options. There was an experimental data collection place that tested and I did that test and I found that my levels were higher than the levels of farmers who had sprayed on application day. And I was shocked because my diet was almost completely organic, free of pesticides, so I thought. But I had two dogs that walked on a lawn and I live in a condo so I don't have control over what's put on the lawn. And I suspect that they were bringing it in and they slept in my bed. And so there was these exposures that I didn't even realize even despite the organic diet.

Beth O' Hara, FN
Oh, that's a great tip. And I've also seen in kids where they had reverse osmosis water filters, they were eating all organic and we finally tracked it down to, oh, they were playing soccer on the soccer field that was getting sprayed or they were going to this park where.

Jill Carnahan, MD
Yes.

Beth O' Hara, FN
I always ask now, you take your kids to the playground, the park, are there dandelions, are there clover or is it like a golf course kind of lawn? And I see it a lot and people live on golf courses and they golf a lot too.

Jill Carnahan, MD
I love that you say that. In fact, if you talked to Dr. Bredesen and I'm in a group about Alzheimer's dementia and we joked about writing a paper called golf course dementia, because so many of these chemicals also affect the brain, of course the whole system. And they're seeing increased rates of people who live around golf courses 'cause there's usually a lot more chemical sprayed. So I love that you said that. I often ask too, do you live near a golf course, because that's a big one for pesticides.

Beth O' Hara, FN
So we've talked about chemicals, we've talked about mold, we've talked about candida. I wanna segue to the nervous system. And we know that there's a huge plexus of neuronal endings, the enteric nervous system in the gut. I like to think of we've got three centers of making decisions even. Three centers of intelligence, our minds, our hearts and guts, because of how much nerve activities there. And mast cells align those entire nerve endings and nerve sheaths. So that's the role with mast cells and things like abdominal pain and abdominal sensitivity pain. Let's talk more about the nervous system role in these types of things, 'cause a lot of times with IBS and I was diagnosed with IBS at I believe about age nine and I was told it was stress.

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
But it was kind of presented to me as if, well, you're just too stressed at school, honey. You know?

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
Just do little, just relax and don't worry about making an A so much and you'd be fine. But it's much bigger than that and it's neurological.

Jill Carnahan, MD
Yeah, so first thing on IBS is about 60% or more is actually underlying small intestinal bacterial overgrowth. So, Mark Pimentel has done the research and really connected the two, not all cases, and we'll talk about the mind body and the interior connection. But there's a large percentage of people where, especially what we call post-infectious IBS, which wasn't necessarily the case of you as a child or anything like that. But someone will travel somewhere, get a food poisoning and that food poisoning will trigger an autoimmune response in the MMC. The complex that regulates small bowel motility and then all of a sudden, there'll be altered motility and that cleansing effect between meals and at bedtime doesn't happen. And then you get like this pond scum, this overgrowth of bacteria, and that creates the symptoms of IBS.

Which with Rome criteria just more often than not abdominal pain or diarrhea or distension, frequently, it's a very generic diagnosis. But the root cause tends to be either bacterial or fungal overgrowth or as we mentioned the enteric system. So our vagus nerve controls motility of the gut. And what happens is in our high stressed society where we're all going 24 hours a day and maybe not getting great sleep and even things like infections, we know now that some tick-borne infections like in ehrlichia and some of these can actually infect the vagus nerve and effect function through an infection. So the vagus nerve, if there's dysfunction and it's not operating correctly, it will alter bowel motility as well and you won't be able to digest or rest. And then that can lead to the IBS symptoms as well.

They did studies in mice and they put them under a stressful situation, which I think was like swimming in water. And they did one set of mice that had a pretreatment with a probiotic called lactobacillus rhamnosus and another group of mice that did not have that pretreatment. And then they did a variation where some of the mice had their vagal nerves intact and others did not. And what they saw was that probiotic actually stimulated the vagus nerve to calm their stress hormones and their bowel. And so we saw in that study how probiotics through the vagus nerve can actually affect not only our gut but our sense of calm. And I thought that was profound, because that's a probiotic affecting mood. That's crazy. Except it's not if we know how it works.

Beth O' Hara, FN
Yeah, and there's so much on that now and it makes a lot of sense for sure. We were talking about, so we talk a lot in this kind of summit about things like vagal dysregulation, limbic dysregulation. We were talking before we started recording something that I don't think is being touched on enough, which is the effects of being around toxic people. And I find that so many of us with chronic illness or empaths.

Jill Carnahan, MD
Yes.

Beth O' Hara, FN
And then if we're empaths with spiritual practice, we're taught to put ourselves in everyone's shoes to understand where they're coming from and to have this acceptance of everyone, which is beautiful. But there's something missing around boundaries and around that people who have pathology aren't playing by those same rules. So, there's a piece there that comes in I find a lot in these cases. I'd love to hear your thoughts on this.

Jill Carnahan, MD
So I love that we're talking about this, because this is so relevant and I feel like patients that are stuck, especially at the level often where they've seen a lot of other doctors. There often is, and again I am included so I'm including my own journey in this. Not saying anyone out there is any different from you or I, but often there's these pieces. So first of all, environmental toxicity tends to affect those who are more sensitive chemically than others. And there is a connection. Elaine Aron did work on "The Highly Sensitive Person", one of my favorite books if you haven't read that and you're one of those 10 to 15%. It relates to our sensitivity to emotions and the empath, the gene and those things.

But it also correlates with environmental sensitivity not only to chemicals, pesticides, foods, sound, lights, stimulation, all of those things. And this subset of the population is often, even though it's only 10 or 15% of the population, I think we see a large percentage of them, because they are usually more environmentally aware, more chemically sensitive. They're gonna be the canaries that get sick from mold or that have gut symptoms related to environmental stress. And so often again we're seeing a larger percentage of these people. I happen to be one of those and learned the hard way. And those people and patients including myself, often are again,

they're more empathic. So the energy of the people around them, the energy of the world, the energy of the consciousness will often be more, they'll be more sensitive to that. So back to your comments on relationships, I feel like addressing not only our limbic system, which I know you're go into in the summit, but addressing our relationships and those that are toxic. And again, I've had personal experience with a couple toxic relationships and I had to really learn. When you think about autoimmunity and you think of Gabor Mate's work, autoimmunity at the core on a metaphysical level is really a attack of self, right? So often the healing at this level comes from finding your value and worth. Number one, trusting your intuition. Number two, loving yourself and loving others. But that loving yourself actually comes first, which at least for me, coming from the kind of background conservative place I came from, loving yourself was not right. You love everybody else, but you don't love yourself.

So I had to really relearn that, because part of the healing of autoimmunity and this overreactivity is trusting our intuition about what we need or what we want and being able to verbalize that in our lives with the people we love. And then the second part is loving ourselves enough to take care of ourselves and to put those boundaries up that protect ourselves. Whether it is in a toxic relationship. Setting a boundary with a parent or child or whether it's what we can do or can't do or even the things that we need to take care of ourselves. 'Cause I've found those of patients like myself that are sensitive, I need a lot of things every day to take care of my health. I need my PMF bed, I need seven or eight hours of sleep, I need good food, I need walking and air and nature and I could go on and on and I need supplements. But there's a lot of things that I have to put in place to take care of myself so that I can function on the level I wanna function.

Beth O' Hara, FN
Same for me, you should see me when I travel, probably the same.

Jill Carnahan, MD
Exactly.

Beth O' Hara, FN
Two checked suitcases and a roller bag for supplement

Jill Carnahan, MD
Two.

Beth O' Hara, FN
I've gotta take it all with me.

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
I had to learn a lot of this as well and I found that it was one of the things that was keeping my mast cells really fired up and especially my gut. And there was this direct relationship between that kind of stress and being so sensitive. What might roll off of most people's backs from somebody who's dysregulated or really stressed out or toxic, for me, was like being in the room with a bear. And my limbic system didn't know the difference. So that's one of the metaphors I'll use with people is to say, well, you're sensitive too and your limbic system may register this as being in the room with a bear. So if you know you're not gonna heal that way, you gotta have really good boundaries. And I got goosebumps when you were talking, because we've gotta encourage people to have that self care and that self love and to have whatever boundaries that they need and they may need to be much stronger. And empaths need stronger boundaries.

Jill Carnahan, MD
Yes.

Beth O' Hara, FN
Than other people.

Jill Carnahan, MD
And there is literature about the narcissist empath relationships. So some of us have had those kinds of experiences. The other thing I'm thinking as you're talking that's so relevant, is when you grew up in a childhood or home or a place where you might be the only one that's super sensitive and you don't know that that's your gift, which it is a gift, you think it's a curse. Like what is wrong with me? You often, at least for me, I've suppressed those difficult emotions of anger and sadness and I dissociate it. I learned to really quickly kind of disassociate from these

things, because it was so overwhelming to my system. So literally, in my forties as I've healed and done the work around this, I have had to go back and relearn how to feel and even the difficult emotions like sadness and anger and to love myself enough to express those in a healthy way. and to know that it's okay and that I didn't have to be small and all of these things around that like relearning to express ourselves. Because so often when we repress anger, fear, sadness, those negative emotions, they actually cause harm physically to our bodies. So we have to relearn how to express them in a healthy way in order to get well.

Beth O' Hara, FN
Yeah, that's beautiful. And I find it often will show up in our guts. Why do you think that is? Do you think it's the nervous system link?

Jill Carnahan, MD
I do, and so many other practices like ayurvedic medicine or Chinese medicine or whatever, their heart is actually their gut or their like the way they think about emotions is a much more related enteric kind of gut system. I'm not an expert in any of those systems, but I'm always amazed at how they have that knowledge in their medical kind of system and it's so connected to the gut.

Beth O' Hara, FN
Any other triggers we should touch on around these types of gut issues that have this mast cell connection?

Jill Carnahan, MD
Yeah, so you mentioned stress and we talk about stress and we were like, yeah stress, I have stress and whatever. I always love to bring in Hans Seyle was the one who actually qualified and quantified stress with his research and he has this really simple acronym that's easy to remember and kind of fun to remind us the kind of things that are scientifically proven to cause stress in our bodies. And it's nuts, N U T S. The N is novelty. So something that's new or we've never done it before. The U is unpredictability. So something where we don't know what's gonna happen. T is threat to ego or it could be threat to health or threat to self. And that could again be these toxic relationships or it could be like the pandemic when we thought we might get COVID or get sick. And then the last one is, so N, novelty, unpredictability, threat to ego, sense of control is the S. And that would be like when things are out of our control, we like to think we have control. Most of the time we don't. But when those kinds of things, whether it's a job situation or

a move across the country or the illness of a family member. When the things are out of our control and all of those things that NUTS acronym can create stress and very frequently we manifest that in our gut. So I think that's interesting to remember and check in with yourself if you experience any of the nuts that might be causing your symptoms.

Beth O' Hara, FN
I love that. And we don't it, we've normalized the stressful lifestyles that we've had so much I think about how 150 years ago we weren't running kids to four different extracurriculars on the weekends and getting to a PTA meeting and then having to have dinner on the table and having to do homework. And we are so jam packed and I think coming out of the pandemic has helped highlight that. People had to slow down, but it seems like we're just trickling right back.

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
To these old ways of being. And one of the ways that I take care of myself is I watch documentaries of people in traditional cultures. And I watch their pacing and I watch how connected they are with the earth, because we so easily lose that and we've forgotten that.

Jill Carnahan, MD
I love that you're saying that 'cause that is so true and again, especially if you're highly sensitive or an empath or having gut issues, it's even more important to really set those boundaries to take care of yourself and to make time for nature, those important things. One of the other lies that we've been told and I was in this pathway as well, is that we have to achieve or perform for love or worthiness. So there's these patterns where we think if we're not doing enough or being enough or achieving enough or producing enough that we have no intrinsic worth or value without what we produce. And again in the US, the nature of our society has really made that I think 10 times worse. Whereas we can just be valued just for being, not for doing. And I had to relearn a lot of that too, but that whole treadmill or to keep up with our neighbors who have their kids each in three sports or those kinds of things. It's so easy to get caught in that mindset, especially in our country, because like I just talked to my friend from Germany the other day and he's gonna take a four week vacation 'cause that's the norm and probably another one in the fall,

and like four weeks. How do you do that, right? And I love it because that's the norm for them. But for me it's hard to get seven days off, let alone four weeks.

Beth O' Hara, FN
It is, and then you feel guilty, because you're not there in the clinic. And yeah.

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
So we've covered a lot of possible triggers. How about we segue into ways to work with this? How do you get people started and we have a lot of really sensitive people in our audience and there's so many beautiful and wonderful ways of doing this. I'd love to hear what are your approaches and what are you seeing working in your clinic?

Jill Carnahan, MD
Yeah, so some of the stuff we touched on and mind body is so key and there's a lot we covered, but just getting to know yourself, getting to know your triggers emotionally, checking in with your relationships, maybe starting a journaling practice or some spiritual connectedness practice, whatever that looks like for you. Those are real keys to start because often when we first see patients, even giving them one herbal tincture, we'll set them off. So we can't do a lot of interventions like we maybe would like to do. So starting on the mind body place that place where we love ourselves, trust our intuition and start setting boundaries that can be the place where we start. After that, granted with mast cell activation histamine, we often need a layered approach, but frequently I'll start with diet first, because as you and I both discovered, those histamine containing foods will just add to the burden.

And if we can take some of those burdens off the system, that's a great place to start. I usually do not start with an intense detox or an intense infection treatment protocol, because those are later in the game. So you start with kind of mind body stuff, limbic system. And then some of the first things I really like Chinese skull cap. I like quercetin, some of these kind of gentle herbs can work. And sometimes getting a good prescription antihistamine that works for the patient pretty early on can be important as well. And that can vary 'cause not everybody tolerates it, but sometimes I find actually going with the prescriptions, H1 blockers, H2 blockers, mast cell

stabilizers, can be pretty profound in the beginning. Just to get some traction on being able to move forward.

Beth O' Hara, FN
And particularly for people that have mold toxicity, there's more people who have salicylate intolerance and I'm finding a number of people who have come into our clinic who don't tolerate herbs, but they'll tolerate some low dose medications.

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
And then they're afraid to try them, because they've had reactions which I get because I have reactions to so many medications

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
that for a while I was really anti-medication and just threw the baby out with the bath water, which was a disservice to me. But I had to come back around. Can we talk about specifically the gut, some of your favorite go-tos, whether they're supplements, medications?

Jill Carnahan, MD
Yes, so probiotics are huge and the right probiotic is huge. I remember again 20 years ago I had, I was clueless. I found this one strain called bacillus coagulans. I did not know anything about what it was, but it was the only probiotic when my Crohn's was very severe that worked for me. Now I know it's a spore. It's just this one spore that's been around forever. Spores tend to work really well for people who are incredibly sensitive to have SIBO or SIFO that's bacterial or fungal liver growth, Crohn's or colitis. So often I'll use small bits of one spore. My other favorite is bacillus subtilis. And these two spores tend to be really well tolerated. And the thing about spores that's unique is, number one, they're very resilient. So if someone were to be on an antimicrobial or antibiotic regimen, they're going to be okay to take that probiotic with antibiotics without any

sequelae. Number two, they're shelf stable because it's like a tulip bulb where they just sit dormant until they need to be activated. They don't require refrigeration or anything like that. Number three, often these patients with histamine intolerance will have overgrowth as we mentioned of fungal or bacterial components in the small bowel. So adding more lactobacillus, especially certain strains that produce histamine will make them worse or make the SIBO feel worse. So I'm a huge fan of those spore probiotics. And again, there's multiple and there's other companies that have like five spores and three spores and but those basic, basic for your most sensitive patient, bacillus coagulans, bacillus subtilis, really effective.

And those can actually start the process if that's all they can take. Bacillus subtilis has been studied, it actually actively fights H. pylori, candida and other bacteria. So it can actually start the process of healing even without antimicrobial herbs or medications. The second thing I really like, if patients have no sensitivity to bovine source, that's the caveat. Bovine immunoglobulin can be incredibly powerful to kinda support that nervous system, support the integrity of the gut. I actually find that more powerful than glutamine in starting to heal a leaky gut. So those two things can be great. If there is overgrowth, again, herbs can be triggers so we might be talked to them and figure out berberine, oregano.

Some of these things again, could be triggers for some people. And one really interesting thing I found, if there is an underlying infection like tick-borne infection say Lyme, babesio bartonella, I'm always surprised that sometimes antibiotics are actually better tolerated and really the gut improves right away. So those subset that Lyme is predominant and that the Lyme disease or co-infection is causing histamine issues or bowel issues. Surprisingly sometimes they do very well on antibiotics, which is not typically my first line for everybody else.

Beth O' Hara, FN
And that's a wonderful thing to share with people who are terrified of antibiotics to hear that even in your sensitive population you're finding if they've got Lyme and they have some of these other things,

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
that might be helpful. And I think again we just, it's so easy to throw that baby out with the bath water when we've had a bad experience.

Jill Carnahan, MD
Yeah.

Beth O' Hara, FN
And to bring back onto the table, now we have to look at these agents individually. We have to look at where this person is in their healing journey and match the right things to the right person at the right time.

Jill Carnahan, MD
And a few other basics I should have mentioned, but I always almost goes without saying, but zinc is key for the gut. Zinc carnosine is a particular form that's really good at coding and soothing and healing if there's gastritis or ulcer. A and D, critical in healing of permeable gut and typically a five to one ratio of A to D is ideal for the first 60 days. That may be too high long term for A, but in the beginning a five to one ratio of A to D is really critical. And those two work together. And often if they've had gut issues, they have fat malabsorption. So they have fat soluble vitamin malabsorption. So A, D, zinc and then like I said the spore probiotics, the immunoglobulin, those are some of the core things.

Beth O' Hara, FN
Those are great pearls. Anything else you wanna share around this conversation? Anything we didn't hit on already?

Jill Carnahan, MD
I know you're gonna have experts talk about mold, so I won't go into that and I have my own story with mold, but mold is probably the most common thing I find that's unknown. The patient has no idea that they're being exposed to mold. And one of the clues to this is, is their box getting smaller? Are they getting incredibly hypersensitive to foods and to chemicals and to things? Mold has a way of doing some really nasty things that weakens the immune systems. So if you have other viruses or infections that weren't bothering you, all of a sudden those things could pop up and cause issues. It's probably, well, according to Dr. Furidis and Dr. Avron, it is the

number one trigger to mast cell activation. So again, if you all of a sudden are super sensitive to histamines, you have mast cell activation that you didn't have before, number one cause of that would be a hidden mold exposure. So, just wanna bring that to light. And again, I know you have more experts talking about that, because this is one of those things that people don't suspect. If you just ask them point blank, do you have mold in your home? 99% of people are like, no, I'm fine, my home is fine. 'Cause you don't see it, you don't smell it, it's not obvious. But if you ask the right questions, have you had water damage? Have you had any damage to the wood under your sink? Have you had leaks of the dishwasher? Have you had et cetera, et cetera. Moisture coming from inside out. An attic that's not sealed properly and there's so many more things. Often we'll find there's water damage in that home or that environment. And that's a huge trigger to histamine issues in mast cell activation.

Beth O' Hara, FN
Absolutely, and it's the number one root cause that we see. And even just inhaling that mold, those spores, get into the sinuses and then we swallow the mucus naturally makes its way into the GI tract and now you've got that colonization. And one of the things that I really emphasize as hard of it is to hear that molds not like viruses or bacteria, mold actually releases enzymes like hydrolysis, proteases, that breakdown our tissues.

Jill Carnahan, MD
Yes.

Beth O' Hara, FN
To get the nutrients out. So they're decomposing and that's part of why they're so damaging. Well, this has been so much great information. Can you let people know both where to find you and then I know that you have a free download for them around mold that they can find in their bonuses section.

Jill Carnahan, MD
Yeah, thank you, Beth. And again, always enjoy, love the work you're doing. You can find me at jillcarnahan.com. I have like 10 years of blogs and information all free. So please go there. You can find me on Instagram at Dr. Jill Carnahan. I'd love for you to follow me there. And products and services, drjillhealth.com. Those are my main places. And as you mentioned, we've done two interviews. I think we might have even another one coming up. On my YouTube channel again

all free. And you just find my name on YouTube and you'll see my channel with over 100 different interviews with experts. So those are all my places you can find me. And then the downloaded guide, I've had this out for a few years, it's just a really great, both you and I have patients who maybe can't see us and easily and need information. So I just made this available for free and we'll make it available to all of your listeners. It's a mold guide on how to get started if you think you might be exposed to mold. What to do with your things, how to clean your house, some basic, basic nutrients you could start on. It's all there in that free guide.

Beth O' Hara, FN
Thank you so much for providing that. And I know you've got a documentary coming out, you've got a book coming out, so make sure to follow Dr. Jill so that you'll get notified of when those are available. I'm really, really excited about it and we're gonna share those when they're available.

Jill Carnahan, MD
Thank you.

Beth O' Hara, FN
I appreciate the work that you do so much and you have been a wealth of information for myself as well. Watching your interviews, finding your website. Just wanna express my gratitude for your work in the world.

Jill Carnahan, MD
Thank you, Beth, it's mutual. I love what you're doing as well. Thank you so much.