Season 1, Episode 17: Women and Vagus Nerve Toxicity with Christine Schaffner, ND

Jodi: I'm super excited to be here with one of my favorite people and closest friends, Dr. Christine Schaffner. She actually was an inspiration for this Parasympathetic Summit, because Dr. Christine has seen...usually patients who come to see her have seen 20 to 30 practitioners before they find her. And one of the things that other people miss that Christine knows to look for is any kind of inflammation or congestion in the vagus nerve. So I'm going to have Christine jump in and talk about what are some of the...a typical patient look like that might have some vagus nerve toxicity or inflammation.

Dr. Schaffner: Mm-hmm. Well, thank you, Jodi. I'm so excited that you're doing this summit, and it's really an honor to be on it. We've had so many of these conversations over the years, trying to understand what is really going on with the vagus nerve, 'cause that's a place where we both love to dive in and connect with. When I'm thinking about how to share information today, really dozens of young women and women come to mind who I treat. And it's this constellation of symptoms that these women are struggling with.

We're learning every year on how to help them better. But the typical patient that I would see that has really a dysfunctional vagus nerve--and we can go into that, what that means--but a vagus nerve that is infected and inflamed and can be filled with environmental toxicants, and there's just not this brainto-body connection or body-to-brain connection that we want via this amazing cranial nerve that we have wandering through our body. So the patient that I think about when we're talking about this is maybe a woman in...again, men have these symptoms, too, but I think women, for lots of different reasons, are a little bit more skewed to having this constellation of symptoms. So they might have something called POTS, or it's called postural orthostatic tachycardia syndrome. So when they stand up, their heart rate goes very fast and they feel dizzy and unwell. And it's very...quite debilitating.

They might have some form of mast cell activation syndrome. So that term gets thrown around a lot these days, and I think it's a really important area to look, but we're not always seeing the extreme version of mast cell activation syndrome, but this imbalance of mast cell and histamine response in the body. We also see these patients have...they might be mold sensitive. They also might have Lyme and co-infections, especially a Bartonella infection that we know that can wreak havoc on the vagus nerve.

Dr. Schaffner: They can also have different mental-emotional symptoms, from obsessivecompulsive disorder to anxiety, insomnia, depression. There's also this whole gut paralysis, or gut dysfunction, where they have slowed motility in their gut that's related also to slowed bile flow and constipation. These are, I would say, what the symptoms are that they look like for this patient, but there's areas of what we would call focal infection in the body that we can talk more through, and these are maybe these hidden or stealth infections that are also preventing the body from getting well and recovering the vagus nerve.

So I'm happy to share more. But as we look at this constellation of symptoms, these women are highly sensitive. They're highly symptomatic. Their lives are very halted because of what they're going through. So it's been quite a journey that many of my patients have gone through. They teach me every day. I've only been doing this 10 years, but in the 10 years, I think we've learned a lot about what to look for and how to help these women, and how to get them on the road to recovery more quickly.

Jodi: Thank you for putting all those constellation of symptoms together, because I think you're going to connect a lot of dots for people about why these symptoms that may not seem to connect are connected. I know that you've done a lot of research about the neck channel and the vagus nerve, and how, when the vagus nerve is congested or infected, it impacts the ability of the body to function. The brain to signal the body, the body to signal the brain. Can you land on that a little bit and just explain what you're seeing and why that is triggered?

Dr. Schaffner: Mm-hmm. Absolutely. So when we think of just anatomy, so the vagus nerve is the 10th cranial nerve. It exits the brain stem, and there are branches alongside the neck. So Jodi and I did a class a few years ago, and we talked about how the neck is really this highway in the body, in and out of the brain, and an area where I see--'cause of the work that we do--that I see a lot of things to clean up in this area to help restore function of the vagus nerve.

So when we're thinking about this, Diana Driscoll actually did some wonderful work. I interviewed her on my podcast, and I believe Jodi's going to connect with her as well. She sees this syndrome as well, and she had a personal experience. But she talks about improper cranial pressure in a lot of these patients. So what that means is there is pressure or fluid build-up in the brain. And I look at it more from the angle of the glymphatic system. So I'm thinking when patients have improper lymph drainage in and out of the brain, this can create a pressure gradient. And we can go through all of this, but what can happen is...let's take a step back and say the underlying cause for some of these women or these patients, they might have a chronic viral infection.

Dr. Schaffner: They might have Lyme and Bartonella. So they may have congestion in their cervical lymph nodes. So their cervical lymph nodes may be an area that if you feel their neck and you can palpate these lymph nodes...so signaling of the immune system is highly active in this area.

So what we see with this is twofold. One is, just think of it as there's a kink in the hose. So if there is pressure or inflammation here, that's going to create a backup or buildup of glymphatic fluid in the brain that it won't be able to properly drain. So when that is happening, there's this pressure gradient that also affects the venous system.

And not to get to in the weeds in this, but the lymph system is highly connected to the venous drainage, or many people have heard of the jugular veins. So these are the veins that are the exit route of blood out of the brain. So the lymph flows along the veins. So, again, taking another step back, we see with some of these patients...what Dr. Klinghardt really has taught me is that when you have Lyme and co-infections, these things can affect the endothelium, or the lining of the veins.

Jodi: Exactly.

Dr. Schaffner: That can create just changes in the structure of those veins that creates pressure or buildup. So what I'm painting the picture of, if you're stuck here, this won't drain and there's going to be here.

Jodi: Right. Right, and it's the lymph, the veins, and the vagus nerve that are all competing for space. And if one takes up too much space, the other has less space.

Dr. Schaffner: Yeah, exactly. We see that specifically in something called the carotid sheath, which Dr. Driscoll writes about in her book, where there's an area in the neck--it's called the carotid sheath--where the carotid artery goes up to the brain. The jugular vein is in that, as well as the vagus nerve. So when you have this pressure buildup in the system, the vagus nerve is going to become compressed. And that's the effect that's going to eventually affect the communication.

So there's a structural piece to this, and then when we have infection inflaming our cervical lymph nodes, the proximity to those pathogens to the vagus nerve can basically--through the work of VanElzakker, I can never say his name, but [crosstalk 08:28]--

Jodi: Yeah, the Tufts researcher, Michael VanElzakker.

Dr. Schaffner: Yeah. He really paints the picture. It's funny. And you know this about me, we see patients every day. I feel like a detective and an observer. Then I go into PubMed and Google Scholar, and then I'm like, oh, wow, this is all...what if this is all related. It's really wonderful how he really created more of a scientific medical understanding of what we're seeing with the infection piece of the vagus nerve.

So if you have these pathogens in the cervical lymph nodes, the proximity to the vagus nerve...so part of our nervous system, we have not only the nerves, but there are these cells that protect the nerve called the "glial" cells. And the glial cells can become highly alerted that there are viruses or Lyme and coinfections. And then that sets a whole cascade of signals to say, hey, wait a second, brain. We are under attack and we need to slow things down so we can get on top of this.

So what's happening is these infections are basically creating this inflammatory process in the body that goes systemic via this, really, connection in the neck, and it's the proximity of these pathogens to these glial cells that are signaling to the vagus nerve, that are signaling to the brain. And that's why the systemic issues are happening. So that's a big piece to land on. We can talk—

Jodi: Right, right. I want to back up a little bit, because you shared so much great information. So vagus nerve infection hypothesis, which is about pathogens and infections triggering that sickness behavior. And that's what we sometimes see in chronic fatigue syndrome, fibromyalgia, or multichemical sensitivity. And also just the structural piece where the neck holds the lymph, the veins, the vagus nerve, obviously, the bones. And compression on any one of those can impact the signaling and the ability.

I'd love to get into, first, the root causes. You mentioned infection as one of them. And then I'd like to talk about some of the strategies. Obviously, every patient is different, but things that you see working to improve that communication. If you can land a little bit more, if you want to expand on infection or gut, or any of the other histamine issues that are at play.

Dr. Schaffner: Absolutely. So I think before we move from the head and the neck...so when I talk about infection...so we know in the world that I work, we look at the immune system. We look environmental toxicity, and, of course, that intersection. But when we're thinking about infection, we're thinking about, of course, the viruses, retroviral infections. We think about Lyme and co-infections. We think about mold illness, so environmental mold exposure, and then also fungal infections, and, of course, parasitic infections.

Dr. Schaffner: So we're looking at that whole soup. And why this is a very hard problem for conventional medicine to solve is because it's not one thing, and this is not a linear process. This is a ecosystem that gets imbalanced when the body is under stress. So when I talk about any of these things, most of my patients have a combination. And it's the chicken or the egg, right? So we're always going to evaluate, assess, and do the labs that we can to demonstrate these things.

But one of the reasons why some people may have gone through treatment for any of these infections but still are not getting well is because they have something what we call "focal infection." So a focal infection, this is a term that we use that comes out of German biological medicine and neurotherapy. These are these hidden infections. And why they're hidden is there's...the immune system isn't having its appropriate response of saying, hey, let's go clean this up. Of course, I'm simplifying that. So the infections that we find that are very related to the health of the vagus nerve are when we look at the tonsils, we look at the mouth, and we look at the sinuses. So just to go through all of those. So the tonsils are a huge area of lymphatic tissue that are really important for our brain and our gut health. I really feel like that's really where the immune system connects our gut and the brain and the tonsils.

And we have this ring of lymphatic tissue called Waldeyer's ring. So we always think of the palatine tonsils, which are the tonsils we know that get swollen when we have infection. And then we have the adenoids, the tubal tonsils at the end of the eustachian tube, and then the lingual tonsils underneath the tongue.

So that whole ring of lymphatic tissue, if you've had chronic strep, if you've had mono, if you've had any kind of chronic infection, this can be an area or reservoir of infection that's an entry point to creating inflammatory...basically not only pathogens but inflammatory cells to keep them...basically the microglial activated and keep brain inflammation up. So we want to always address the tonsils.

And many of these patients that I work with that I've shared, they either have had chronic tonsilitis, a history of strep, history of Epstein-Barr. In some patients, I do recommend a tonsillectomy. I never take that lightly, but when we see these patients struggling for so long, sometimes that's going to be...the pros far outweigh the cons, and we just need to get that really unhealthy tissue out of the body so the body can--

Jodi: I've heard you say that tonsils are...Klinghardt said the tonsils are the toilet of the brain. Is that because keeping the tonsils in there keeps these pathogens in circulation and removing them eliminates it?

Dr. Schaffner: Yeah. Yeah, exactly. So when we think about that "toilet of the brain" comment, the lymph out of the brain drains in the cribriform plate. So if you Google that, that's at the base of the sinus, and basically it's the communication between the sinus and the brain. And the lymph drains through there and then drains in the back of the throat. So if that's a highly infected or congested area, that's going to affect lymph drainage. Just think of that whole basically congested [crosstalk 14:38] in the neck.

Jodi: Beautifully.

Dr. Schaffner: Dr. Vojdani, who is the Cyrex lab owner, or lead advisor there, he wrote a paper showing how strep can--in the tonsils, basically--can create this Th17 response, which means that they're keeping the microglia activated because the cells are going through the cribriform plate and getting to the brain. The location is key there.

Jodi: Right.

Dr. Schaffner: So when we move the palatine tonsils and the adenoids--again, I'm not recommending this for everyone, and again, I know this--

Jodi: Right, but it could be a blind spot. If people have been sick for a long time and they don't know to look here, this could be hugely helpful.

Dr. Schaffner: Yeah, absolutely. So when you see the patients we see, where tonsillectomy is no big deal if it's recovering your health and your life--

Jodi: Yes.

Dr. Schaffner: Sometimes removing that tissue can just allow us to see leaps and bounds in progress rather than trying all the tools that we know, which, of course, in a perfect world with unlimited resources may work eventually, but it just is a slower process.

Jodi: Oh, yeah.

Dr. Schaffner: So the tonsils are really important, and then the mouth. So the mouth is an area...just again, even if you just think very simply that the proximity of the mouth to the neck and the vagus nerve--

Jodi: Yes.

Dr. Schaffner: So if we see infection or environmental toxin in the mouth, that can affect the vagus nerve. We screen all of our patients for amalgam fillings. Most patients have an awareness of that, but still, many patients still need support getting their amalgam fillings out. We screen for root canals. Root canals are essentially dead teeth. Basically, the tooth dies, the nerve is taken out, and then the dentist stuffs the root canal with non-biocompatible material that can basically be a breeding ground for infection over time, and they've shown that.

So even when we have these root canals extracted and we send them to labs, we see a host of viruses, bacteria, even amoebas. So we know these are not sterile teeth. And even cardiologists know that our oral health is hugely important to our systemic health because of the blood supply and the entryway to the rest of the body.

And then we look at the wisdom teeth. So the wisdom teeth, in some patients when they're removed they're not removed as properly as we'd all like. Then depending on the state of the immune system, too, that area where you take the wisdom tooth out becomes a pocket, and it doesn't really fill in with healthy bone. It becomes a pocket of infection, a reservoir of infection, where Bartonella can hang out, viruses can hang out, bacteria, even parasitic infections can hang out. So the wisdom-tooth area is related to the small intestine, endocrine, and heart. All vagus nerve systems. Chinese medicine made that connection already for us, but when we think about just the proximity to the vagus nerve, that can be a big roadblock.

So we look at the tonsils. We look at the mouth. And then whenever we're looking at the head and the neck and the brain, we always look at the sinuses, for all the same reasons we look at the tonsils. The proximity to the brain. And if someone's had a mold exposure, or...most of my patients have sinus issues, and I just think of it as they have sinus dysbiosis. Just like we have gut dysbiosis, there's a whole microbiome in our sinuses that often gets imbalanced, and we just need to continue to change up strategies. Really, whenever we're trying to recover the vagus nerve, we really clean up this area.

And then we wanna get the lymph draining. So the lymphatic system is this whole other system. And I know you and I both love learning about the lymphatic system, and I feel like the lymphatic system is still really one of the most overlooked systems in the body. I mean, I always remind people the glymphatic system was only discovered in 2015. They just called it interstitian and a new organ, which is highly interconnected with the extracellular matrix and the lymphatic system. Even the mesentery in the gut, they found just a few years ago it's this continuous connective tissue lining in the body that has a lot to do with communication. I just share that, because it's like when you google lymphatic system, it's not going to...I think we have a lot to learn, still, and I think we have a lot to [crosstalk 19:16].

Jodi: Well, I want to pause and just sing your praises. That was the best explanation I have ever heard about the tonsils, the teeth, and the sinuses, and why...there are people that walk around and they always have a stuffy nose and live with it or think it's nothing. And it never occurs to them that until they clean that up, that can be mold that can be throwing off their whole body. So thank you. That was unbelievable. And that's a key starting point.

And then the lymph, we don't really think about the lymph because it's forgotten the cells mobilize into the extracellular matrix, then the lymph carries things to the blood, but the lymph doesn't move itself. So it's really important, if you can land on the lymph and land on...even, I know you have done some photographs of congested lymph nodes and how that impacts the vagus nerve. If you could talk about that a little bit, I think it's fascinating.

Dr. Schaffner: Yeah, yeah. And I think with conventional medicine, their understanding of the lymphatic system is post-mastectomy. Lymph nodes removed. People get swelling, and then all of a sudden they need compression to support them. It's way more than that. I think our patients, the lymphatic system is where all the action is, and so when it's clearing something [inaudible]. It's also an immune surveillance system. So that's where all of these stealth pathogens are not circulating in the blood. They're in the fascia. They're in the connective tissue. They're in the organs. They're in the nerves. So the lymph is this intersection there.

So with the lymphatic system, one of the things--before we talk about the neck--I always want to remind people that in order for the head and the neck and the extremities to drain, we have this whole lymphatic system in our gut. So one of the things that we learned through one of Dr. Klinghardt's friends in Germany, she trained us in a lymphatic technique called Sophia Matrix. And what that means is that we start on the abdomen before we go to the head and the neck and the extremities.

So even if you're thin, you can have...if you've had a chronically inflamed system or a chronically inflamed digestive tract, you can have a buildup of lymph in your gut. So what we do is we help to drain that lymph with manual techniques. There's all sorts of wonderful other tools, too, for the lymph. And I think even if you can't find...if you can't come to Sophia and do Sophia Matrix, Maya Abdominal Massage, castor oil packs, even colon hydrotherapy and coffee enemas...I think part of why they work is they're getting the lymph to move in the gut as well as the bile, of course. So just--

Jodi: And to that point, what you've said before is that the body is a hydraulic system, and so if there's congestion down below, the brain can't even drain. I love that you do that. I don't think people talk about that, really getting the gut moving, or even if you're constipated, starting there. You can't start mobilizing toxins from the brain if there's congestion lower down in the system. So, keep going.

Dr. Schaffner: Yeah, absolutely. And, of course, that ties into the vagus nerve, just to take a step there. A lot of these women and a lot of these patients have slowed motility in their guts, so they're going to be constipated. They're going to have sluggish bile. The vagus nerve actually communicates to the gall bladder to release bile. So if you have vagus nerve dysfunction, you can have bile stagnation and constipation. So it's this catch-22.

But we have lots of tools to help override that while we're healing the vagus nerve. So we'll use bitters and bile salts and phospholipids and different things to support acetylcholine communication in the gut and different things, as simple as magnesium and vitamin C and other herbs, to get the bowel moving. So that's really important, for sure. We always want to make sure our organs of elimination are properly moving so we can minimize side effects or reactions when people go through treatment. So, yes, we've got to get our guts moving.

We talk about the gut-brain all the time, but think about the gut-brain in this kind of lymphatic connection. So the lymph and the gut and the lymph and the brain are highly interconnected, this parallel system in the body alongside, of course, we need to look at the microbiome and we need to look at all the other things in the brain. But I'm just trying to give just a different lens of looking at things.

Jodi: And I want to really land on you're hitting it from both angles, right? You're helping to get the vagus nerve activated from the brain down, and then you're also working from the gut up, so that it's almost like the information highway. You're helping it meet in the middle by working at it from both ends.

Dr. Schaffner: Yeah. And when you know how the vagus nerve works, so 20 percent is brain to the body, and then 80 percent of the fibers are body to brain. It's that bi-directional communication that's so fascinating about this nerve, and we have to look at it from both angles, for sure.

Jodi: Right. And I love that you brought in the gall bladder. Datis Kharrazian says coffee enemas are a great way to activate the vagus nerve. Yeah.

Dr. Schaffner: Mm-hmm. And that's why. Yeah. That's awesome. So just coming upstream to looking at the lymphatic system in the neck, so we are friends with Dr. Ruggiero. He's a wonderful man, a researcher who's done a lot of viral research and retroviral research, and also developed and formulated products. And he helped us develop something called the Sophia Flow Cream, which is a unique cream that has a probiotic in it that produces something called macrophage-activating factor. And it has this unique property to help move lymph and also support the immune system.

And he is a radiologist. When we were developing the cream, he came to our clinic and did images of our patients and looked at--via ultrasound--so he looked at basically congestion in the neck and basically lymph node swelling and all the signs of lymphatic stagnation.

And while I'm talking, I also want to make sure I reference his paper, which he did with Dr. Bradstreet. And he knew this work before he came to our clinic. So he saw in the children with autism that they had pooling in their brain of lymph buildup in the brain, and they also had cervical lymph node congestion. So they demonstrated by opening up the lymph in the neck, they were able to remove lymph in the brain, and it led to symptom improvement. So that really inspired him to come up with more tools.

Jodi: And to that point, I saw the pictures. What was fascinating to me, we were talking about how the lymph, the veins, and the vagus nerve, one can congest the other. You had these before-and-after pictures where you had the congested lymph that was pushing against the vagus nerve--

Dr. Schaffner: Right.

Jodi: -- and then anything you apply transdermally gets into the system sometimes faster than what you assimilate through your digestive tract. So it really helped to open up the lymph, and then it left more space for the vagus nerve and improved vagus nerve function.

Dr. Schaffner: Absolutely. So we use the Flow Cream. You have your lymphatic essential oil blend. There's the self-lymphatic drainage massage. There's lights. I have the sauna-space thing on my desk here that's a nearinfrared incandescent light that...light really moves blood and moves lymph, and so I think we probably under-utilize light, even though it's becoming more popular and more affordable for people to have home units.

Jodi: These are all great tools. And you have a great video on your site about how to...if people get nothing out of this video, just knowing to help move lymph in their neck could make a really big impact.

Dr. Schaffner: Absolutely. Absolutely. Yeah. You already summarized just moving the lymph in the neck is going to off-load stress on the vagus nerve structurally. And then using tools like the Flow Cream that has the immune support, and then systemic tools. We have to get to the root of the infections. We have to support the body clearing the infections. And we use a lot of herbal medicine. We love using liposomal delivery for herbs because of the absorption.

Herbs work, and they just did a study through the San Francisco arm that supports Lyme research, and they looked at Borrelia. It was an in vitro study, but it was essentially looking at different herbs, their effect against spirochetes versus antibiotics. And all of the herbs that we traditionally use, they used. And they showed that they were way more powerful. So things like cistus and Japanese knotweed and artemisia. And we love andrographis and astragalus and red root, and all of these herbs that are really wonderful. So we use different Lyme herbs. We use different antiviral herbs.

We also, of course, treat parasitic infections. I think parasitic infections are very commonly overlooked, and very, very common. When we say parasitic infections, we're not only talking about worms but we're talking about protozoa. So protozoa act more like bacteria. There's definitely a connection between chronic parasitic infections, and they can affect the lymphatic system. I am always reminded that clearing out parasitic infections can have a profound effect on the lymphatic system.

So if you've tried all these things and still stuck, please, please work with a practitioner who acknowledges not only the labs you can do to try to demonstrate parasitic infections but also the clinical signs and symptoms. And one of the things that we know is that, unfortunately, some of the lab tests, there are a lot of false negatives, meaning the parasites are really tricky. And when we do a stool sample, we're not always going to capture an active parasitic infection.

But the tests are getting better. I like GI-MAP. I like DiagnosTechs. However, if you do a basic complete blood count--a lab test--there's an immune cell called an eosinophil. And eosinophils tend to be related to allergies, but they're also responsible for helping the body clear parasitic infections. And, of course, I think of the connection between parasites and allergies, but that's a whole nother topic.

Jodi: So what you're saying is if their blood work comes back with those levels high, think parasites?

Dr. Schaffner: Yeah. If the eosinophils are above two percent, I would say-- and you have the other signs and symptoms--that can be a clue. So that can be a clue.

Jodi: I just wanted to say, I love plants. The reason I love essential oils is because they're helping the immune system of the plants. It makes sense to me, they're fighting predators that they would be powerful in parasites.

Dr. Schaffner: Absolutely. And I know there are just lots of herbal tools to medications that we use for parasitic infections, but that's another way to also help recover the gut. We know if you have chronic dysbiosis or chronic livergall bladder stagnation and tried a lot of things, parasitic infections can affect the bile ducts and, of course, lead to dysbiosis. So it's a very rewarding thing to treat. You just [crosstalk 30:47] comfortable identifying and looking there.

Jodi: Yes. And can I ask you to talk a little bit about histamine and the vagus nerve, and how those are correlated?

Dr. Schaffner: Yeah. There's this whole realm that I continue to dive in about histamine and all the variations. But a lot of these patients that I've mentioned, this constellation of symptoms, they often have...whether it's a diagnosed mast-cell activation syndrome, which some of them do, to some spectrum of an overactive mast-cell response, meaning that their mast cells are more easily triggered to release histamine.

So histamine creates all these symptoms from hives to rashes to flushing to nausea to...there's a lot of brain fog. There's a lot of symptoms you might not always translate to just rashes and hives with histamine. Dr. Jill Carnahan has a really great blog post on histamine. Yeah. So this histamine responses, it also makes these patients harder to treat, because they're highly sensitive too. So they're going to be the people that I start with one drop of an herb, or we--

Jodi: Right. So they don't react.

Dr. Schaffner: Yeah, exactly. All of this stuff. So I feel that there's this whole...we're still learning about histamine, and so there are natural compounds to help stabilize the mast cell or help the body clear histamine better, or are H1 or H2 antagonists, and then there are medications as well. So how this all relates to the vagus nerve is I think many-fold.

Jodi: Right.

Dr. Schaffner: The things that I can share with in my mindset...so there's a lot of histamine in the gut. So we have our parietal cells in our stomach that produce histamine. So if you have chronic dysbiosis in your gut or mast-cell activation in your gut, remember the vagus nerve is going to sense that in the body and communicate that to the brain. So it can be a signaling thing that happens in the digestive tract.

Dr. Schaffner: The other piece that I still am learning about is the brain stem connection, where there's a lot of mast cells in the brain stem. So the way that the vagus nerve communicates to the brain is via the brain stem and has to cross the brain stem to go into the thalamus to where it communicates. So again, when the body is in this overactive mast-cell response, it can affect the communication in the vagus nerve.

And the other thing I see, too, Jodi, is that when the vagus nerve is really stressed and having a hard time because of all of the things...infection. We haven't even touched on environmental toxicants that affect the vagus nerve, but there are all of these stressors. And then I come to think, and maybe I'm wrong, that mast cell's secondary to all of this, but it's definitely a presentation.

So what happens is--what I believe--is that this is this whole other secondary inflammation that's happening in the body, and then that's creating a lot more stress when there's this histamine response that's overwhelming the vagus nerve. And then the vagus nerve was already stressed and doesn't have the proper communication to turn off that inflammatory response from it that it knows how to do. So long story short--

Jodi: Right. It becomes a vicious cycle. One feeds the other.

Dr. Schaffner: Yeah. And long story short, if the vagus nerve is dysfunctional and not producing enough acetylcholine, it's not equipped to balance this histamine response. So this histamine response is going to be overactive, because what they've shown is the vagus nerve stimulation can actually help quiet mast cells. It's part of the putting the brakes on the histamine, if you will.

Jodi: That is so amazingly put. You shared so much amazing information. I'm so grateful. Did you want to touch on the gut, or did you want to just share your--

Dr. Schaffner: Yeah. I think just with gut health, think of lymphatic drainage in the gut. Think, of course, of all the things that create dysbiosis from bacteria to fungus, and don't forget parasitic infections. I think health is all about lymphatic flow and bile flow. I'm a big proponent of getting the bile to move in any way, shape, or form that you can. Coffee enemas being a really wonderful strategy, especially when you're not feeling well.

So I think those are the things that I really want to make sure people take away with, is if only you can do at home castor oil packs and coffee enemas, you're doing a great job supporting your lymphatic system and getting the bile to flow in your gut, which will translate into better balance in the gut that translates to better...the vagus nerve can tell the brain it's all okay down there. So, yeah. That's what I would just leave with, as far as digestive health.

Jodi: This was so amazing. Thank you so much for doing such a deep and such an incredibly comprehensive and understandable dive about the tonsils, the mouth, the neck, the lymph, the gallbladder. This was amazing, Christine. Thank you.

Dr. Schaffner: Well, thank you for the invitation, and I'm so excited that you're sharing all the information that you are on the summit.