Introduction to Gut-Brain and Trauma

Welcome to this interview on the Biology of Trauma Summit 3.0. Talking about the trauma disease connection. And I'm your host, Dr. Aimie. And I'm so excited for this interview because the importance of the gut brain connection is huge.

And so if you have any type of GI symptoms or GI conditions, this will be an important topic for you. Now, in this interview, we talk a lot about the vagus nerve and we talk a lot about stress.

So before we go into this, it's going to be important for you to understand the difference in our physiology between stress and trauma, because they actually have different effects on our gut.

And in this interview, it's a bit mixed. And so you're not going to know specifically what are they talking about, the stress on the gut or the trauma effect on the gut.

So let's be clear on that before we jump into this interview so that you can go into it with that understanding and that lens and get a lot more out of this interview.

And to share with you the difference between stress and trauma physiology, let me share with you this graphic. This is a tracking of the nervous system, and this is actually a tracking of my nervous system back when I was first starting learning about my own nervous system and the stored trauma in my body and how it had led to my health crash.

I started tracking my energy levels and that led me to develop this understanding of the autonomic nervous system, which then, as I continued on in trainings with somatic experiencing and poly vagal theory, it fit perfectly and I was able to become the expert on my autonomic nervous system.

And that's what I want to teach you. And that's what I teach on the 21 day journey. Now, the difference between stress and trauma. So up here at the top is the stress response.

And down here at the bottom is the trauma response. And so what is that difference between stress and trauma? So the difference between the stress and trauma response and physiology is that stress is like having your foot on the gas pedal.

And it's not just keeping your car moving. It's on the you know, you've got your foot all the way down, pedal to the metal and your car is accelerating.

And that's an important point. So the stress response in your body is that high energy and we are moving, we are taking action. There are different hormones that are behind that stress response, but it is movement, it's action.

And it's an acceleration of our energy, including our metabolism. So this was this is where you all feel the most alive. This is where you will feel your strongest.

And in fact, you can do superhuman things sometime that you look back and you're like, How did I do that? Well, it's because you were in the stress response.

And that's what that's the gift of the stress response, is that it's supposed to be temporary and it gives you this amazing energy to move you to take action.

Now, the trauma response or like remember that breath, the stress response is at the top and the trauma response is I call it the dive bomb because that's what it feels like inside in terms of our energy and we dove bomb into a low

energy state.

Now, this does not mean that your foot is no longer on the gas pedal. This just means that your autonomic nervous system has thrown on the emergency brake in your car.

So maybe your foot is still on the gas pedal. Maybe it's not.

How Stress Disrupts the Gut-Brain Axis

That is further advanced topics that we'll have to explore later. But your emergency brake has been pulled on, which is strong gear, then your gas pedal.

And so the trauma response when that gets triggered and there's a couple of things that trigger that when that gets triggered your body goes into a low energy state and it can feel like it.

You go dead inside, you go numb inside. You you you feel that not you feel that twist in your gut. We're going to talk about gut sensations in this in this interview.

So the trauma response is a low energy state and your body can feel like it collapses. If you are in the stress response, your body is up, your chest is open, you're ready to fight, you're ready to run.

You're taking action. The trauma response is where you slump. And oh, see, like I just go into that low energy state, like, I don't want to do anything.

I, I feel overwhelmed by it all. It feels like it's too much. I don't even know where to start. It feels like too much. What's the point? It doesn't seem to make a difference anyway.

These are all the thoughts, the feelings, the sensations that come when our body is in a trauma response. So as you can see, these are very different physiology, stress physiology, trauma physiology.

And their effects on the gut are going to be very different. Now, the we mentioned in this interview about IBS and the back and forth between the two and that is what I see a lot of is a lot of people coming into my 21 day journey.

They don't think that they've got trauma. They recognize that they've had stress. And what we do is that we start to work with bringing in safety and support and then safe expansion for the body.

And in the process, they discover that they do have this stored trauma patterns in their body, that they do go into that collapse, that slump, that exhaustion, that I don't want to do this anymore place.

And that is the stored trauma, but it's the back and forth between stress. I'm super stressed and I can't do this anymore and I'm stressed and I can't do this anymore.

It's that fluctuation back and forth that creates a lot of the GI symptoms that we have. So with that, I'm so excited, I'm so excited to jump into this interview with you.

And I've invited my good friend Pedre to, Vincent Pedre in order to lead us through this conversation. So let me pull up his bio so I can introduce you to him.

Dr. Pedre is the Medical Director of Pedre Integrative Health and Founder of Dr. Pedre Wellness. CEO, founder of Happy Gut Life, and has worked as a nutraceutical consultant and spokesperson for Nature MD, an Ortho Molecular Products.

He is a M. D. Physician and a functional medicine certified practitioner with a concierge practice in New York City since 2004. He has lectured as faculty for the Institute of Functional Medicine, as well as a forum in one of the conferences for Functional Medicine.

And he believes that the gut is the gateway to excellent wellness. So with that, let's jump into this interview and if you are wanting more information on this store trauma and the difference between stress and trauma, if this is new information for you, then let me show you where you can get that guide quickly.

If you go to my website, trauma healing accelerate accom you scroll down to resources. There is a resource here. Steps to identify and heal trauma would be an excellent one for you, but more important than that would be this essential sequence guide.

This will walk you through exactly what I just walked you through in more detail so that you can understand the difference between stress and the trauma response and then understanding that difference.

What is my next step? If I recognize that this is some of the patterns in my physiology, what are my next steps? And that is the essential sequence. So with that, let's jump into this interview and learn all about digestive system issues and the gut brain connection with the vagus nerve.

Dr. Pedre, you have been a gut expert now and so I really want to explore this gut brain connection with you. But how inflammation and stress disrupts a healthy gut brain connection.

So start maybe by just explaining how stress can start to influence an impact, disrupt the gut brain connection. Yeah, there are a couple of things that people need to understand in order to understand the mechanisms behind this, which I think are really important because then they help you understand what's happening in your body and you can also see that you're not crazy or that these things are happening, that there's actually a biological reason behind it.

And the first part of it is understanding that the brain in the gut are connected by a very long nerve called the vagus nerve. And that nerve has fibers pointing up to the brain from the gut and also fibers pointing down from the brain to the gut.

And 70%, 70 I mean, some people think even up to 80% of those fibers are actually pointing up and only about 30, 20% are pointing down. But that shouldn't take away from how important the downstream effect is on the gut, because I like to say that stress is like an attack on the gut.

And certainly when people have been stressed, sometimes they feel butterflies in their stomach. You can get kind of sick, nauseous, you might lose your appetite.

Things might not sit right in the gut. Anybody who's been, like, super stressed, like, let's say going through a breakup, going through a divorce, you can lose your appetite.

Food just doesn't sit well and part of the reason for that is that top down affect the brain to the gut. We depend on a certain level of nerve impulses coming through the vagus nerve to keep the internal organs healthy.

And when you're under stress, you lose those impulses. So we call this low vagal tone.

IBS, Vagus Nerve, and Trauma Patterns

So you kind of lose a little bit of that drive that's coming from the brain down to the gut and what that controls is things like stomach, acid production, digestive enzymes, secretion, but also gut permeability.

So it's actually controlling how permeable your gut is. Now, gut permeability has a lot of different controls, but when the gut becomes more permeable as a result of just being stressed and just think about that and, and all the other things that happen when, when a person is stressed, you're not going to sleep well.

You're going to gravitate towards more processed foods or comfort foods, maybe sugar or maybe salty, crunchy stuff, but you're going to gravitate to more carbs, which also are going to aggravate the internal ecosystem of the gut.

So when you're under stress and you lose that vagal tone and the person who's feeling this might feel like a knot in their stomach, or they might feel like they've lost their appetite.

They're so stressed they can eat anything or just things don't sit right in the stomach while at the same time gut permeability is increasing and that's causing an increase in the possibility of inflammatory substances from the gut to enter the body.

One of the biggest ones that we talk about is LPS. Lipopolysaccharide, also known as Endotoxin, comes from bacteria that are naturally living in everybody's gut.

And when the gut is tight and sealed, that endotoxin can't get through. But when the gut gets a bit leaky, that endotoxin is able to make its way through and the thing about it is that because it is a lipid part lipid molecule with the sugar molecule, the lipid part makes it membrane soluble.

So it's able to cross that blood brain barrier, get into the brain and cause inflammation because it activates inflammatory pathways, especially in the hypothalamus, which is the central control center of the brain.

And then that has ripple effects that can lead to feeling anxious or feeling depressed. And then it becomes this vicious cycle, because the more anxious, the more depressed you are, the more you're probably not going to make the best eating choices for yourself.

And then it just keeps you in that cycle of gut inflammation. Brain inflammation. So that's one of the the very important aspects of the gut brain connection.

But it can also happen in the reverse where the gut is affecting the brain in, in a different way. The gut bacteria produce neurotransmitters. And probably people have heard this before, that 95% of our serotonin or happiness molecule is produced in the gut.

Well, the thing is that I think when people when people say that, they're implying that, that serotonin is getting into the brain, that serotonin can't cross the blood brain barrier.

So the gut serotonin is then being produced so that it can circulate up into the brain. It's actually being produced to have a local effect in the gut.

It controls motility, but also very importantly, it stimulates five t receptors that are all the nerve endings of the vagus nerve. And by doing that, it sends a nerve impulse back to the brain.

And that nerve impulse from the vagus, which is part of the parasympathetic nervous system, helps keep us relaxed, rested and digesting. It activates GABA Gamma-aminobutyric neurons in the brain, so it releases GABA in certain regions of the brain, kind of calm things down in the brain.

So we think of like, you know, like historically, like, you know, they're saying like happy gut, happy heart, you know, so and people usually, you know, historically mom's grandmothers, the way they love is by feeding you, right?

They give you they want to they want you to eat and they want you to eat more. So we've always kind of known this connection between the gut and the brain, but not always, you know, with the way that the food supply has evolved, with lots of sugar and processed foods and food coloring and things that are just artificial sweeteners, things that are not great for our gut, our gut microbiome, but then trade alterations that are going to alter the way the gut is interacting with the brain and then affect brain health as well.

So I'm really seeing like this accumulation of a lot of insults on the gut between the artificial foods and colors, the processed foods, the high sugar foods perhaps, and then stress on top of that.

And now you've got this almost loop of gut inflammation, brain inflammation, gut inflammation. And it seems like that would be hard to get out of in our modern world, where there's always more stress and there's always

processed foods.

And it's hard to get that nourishment and the nutrients that we need to even disrupt that loop that we get in. One of the pieces that we talk about a lot in the biology of trauma is brain inflammation and how that's closely related with the trauma response in the body and how, yes, that will then shut down the vagal tone, cause the digestive problems.

But what we're also hearing from you is that the gut inflammation can promote the brain inflammation, which will then of course have these same effects.

So that. If you have actually promote brain inflammation. And a leaky gut, if you have a leaky gut, it also creates a leaky blood brain barrier. And it's it's really interesting how all of this is imprinted early in life.

So we know that the limbic system is our reptilian brain, the part of the brain that can develop a a reaction to trauma and then just kind of stay in that that loop.

It's that part of the brain that is all about survival. And so they did a study with mice. Now, mice are not humans, but they can be good models of what might be going on with humans.

And they were looking at germ free mice versus mice that had the right representation of the gut bacteria. And what happened with the development of their limbic system and their reaction to an anxiety provoking stimulus.

And what they found was that the germ free mice actually had a hyper active, hyper reactive limbic system and had a much higher anxiety reaction than the mice that had more of a normal gut flora.

But then what they did was they took those germ free mice and they cohabitate, did them with the other mice and mice. They they kind of like to eat each other's poop.

So it's a way to do a fecal transplant in mice as you just put them in the same cage. And so then you're looking at a germ free mice that has no gut bacteria and then measuring the effects of having gut bacteria in those germ free mice.

And they found that when they're bifidobacterium infants, which is a very important, very early probiotic bacteria that develops in the infant through breastfeeding, that when their gut top populated with that, their limbic system calmed down.

So there is some sort of imprinting that is happening really early in life potentially, that's coming from the interactions between the gut microbiome and the brain.

That leads to how reactive we are to external stimuli and how how likely we might be to experience trauma, For example, So then we can backtrack and think if if you were born by C-sections, you didn't get that initial colonization from vaginal flora.

And then, you know, let's say you were born in the sixties or seventies when breast milk was considered bad and doctors were pushing formulas as the best thing you could do for your infant.

So a lot a lot of kids who were born during those eras were were given formula instead of breast milk. And those formulas did not have those very important prebiotic human milk oligosaccharides that were needed in order to develop that bifidobacterium infants, which is so important in the early gut of the infant that now you know, maybe if we can extrapolate some things happening there in brain development that's being controlled by the gut, and thus you can then understand maybe someone who was not breastfed, who was formula fed, if you didn't develop that early gut microbiome in the way that it needed to, that they might be more prone to developing a trauma like reaction in their brain because they they didn't have that initial regulatory paradise that was needed early in life.

That also, if you think about it, comes from like the closeness, the warmth, the the feeling of love that comes from

being breast fed, you know, being held in that way, that connection with the mother.

So what I'm I mean, this is fascinating. Thank you for sharing that study. I actually did not know about that. So I'm going to link that one up. But it brings home the point of what is a stress for someone else might be an actual trauma because they have a heightened anxiety response.

They have a hyper response to their autonomic nervous system, to an event. And so two people side by side, same event, same context, same everything. And yet one person walks away with being like, whew, that was that was hard.

But I got through okay. Whereas the other person is now dealt with. No, like that to me felt like overwhelming and I'm having a hard time bouncing back.

It's fascinating. Also, one of the connections that I'm making with what you're saying is in the somatic world, we talk about a pattern in the autonomic nervous system called global high intensity activation.

And this is also from very early in life. So that's why I'm making these connections. And it is exactly this this heightened response of the autonomic nervous system, the survival system to everyday circumstances, where your normal stressors for them become like panic moments.

And then their body goes up into that high anxiety, but then drops into what we call the trauma response or the freeze response. And this is this is where I'd like to go next.

Dr. Pedre, because that global high intensity activation, this pattern that you're talking about of the heightened and high hyper reactive anxiety response has been associated with IBS later in life.

And I'm thinking specifically of the book written by Dr. Robert Scaere, NCAR for the listeners, and he connected, laid out the mechanism of the vagus nerve and this response between high anxiety and then going into the trauma response and actually it was the back and forth between the anxiety and the trauma anxiety and trauma response and that he felt and wrote in his book was the underlying mechanism for IBS as an adult.

So what are you, what are you seeing in regards to IBS symptoms? So, you know, if they have IBS for one thing, because I think a lot of people technically have IBS, but they haven't been diagnosed and I don't think that they need to be diagnosed.

But still, IBS, maybe a brief description of what it is and then your view of this heightened anxiety and hyper response and even the vagus nerve in the role of IBS.

Yes, there are different types of IBS. There is what we call IBS RD, which is IBS that is predominantly characterized by diarrhea or by loose stools, and that type of IBS.

The typical person might have multiple bowel movements a day, like 2 to 3 bowel movements a day that are loose and a lot of times they're preceded by discomfort, cramping that is relieved by having the bowel movement.

Now there's IBS C, which is the opposite. It's constipation, predominant IBS, where they can still be bloating, abdominal discomfort, kind of a similar symptoms, except instead of having diarrhea, the person has mostly constipation and then there is a one in the middle.

They call it IBS. M for mixed where a person alternates between diarrhea and constipation. Now, the thing is that IBS is in many ways it's a physical, physical disease.

Right. And and there are things that could cause IBS that might not be diagnosed. There's dysbiosis, an imbalance between good and bad bugs there's which can be caused by exposure to antibiotics.

Diet, Microbiome, and Lowering Stress

There's also the possibility that the person is reacting to foods that are not agreeing with their system, but they keep eating those same foods and they keep causing the IBS symptoms.

So there's there's that there's also over-the-counter medications that can cause leaky gut that then might make it more likely that a person will become sensitive to certain foods.

So, for example, if you have pain and you take ibuprofen on a regular basis, well, it's increasing your intestinal permeability, it's making your gut more leaky, which is also increasing the likelihood that partially digested food proteins from foods that you should not react to might enter your system.

So you might develop a reaction to corn, whereas corn is not something we should react to, but the body will see it as foreign. If particles of that corn protein are getting through the gut lining before they get fully digested.

So there's those possibilities. And then on top of it, I look at stress as the great modulator. So stress is going to make things worse. Or if you can de-stress, it can actually make physical symptoms better.

So you might have a food sensitivity. Stress is going to increase your reactivity. And if you're low stress, it might actually reduce your reactivity over time because your immune system is not over activated.

There's actually a lot of I lecture on this because there's a theory or there's an evolving theory about IBS that there is a subset of IBS that is actually an autoimmune disease and it's triggered by a food poisoning with either one of these for bacteria, campylobacter, e.coli, salmonella.

And what is the fourth one I said e.coli, salmonella. Campylobacter. There is one more that's escaping me right now, but they all produce something called cytolethal distending toxin.

And this cytolethal distending toxin damages cytoskeleton proteins inside the cells that line the intestine. And by doing that, they actually break down the cell and then cause an increase in gut permeability and exposure to a protein.

That's a that's a protein that links the just imagine that our cells have all this scaffolding inside that kind of keeps the cell, you know, nice and plump and in place.

And there are these connections between the cells. And then there's this protein called Ventolin that connects the internal structures to those connections.

And people develop a cytolethal distending toxin, let's say triggered IBS can actually also develop antibodies to vinculin, which is cells. And so then it, IBS can become an autoimmune condition.

Now the only IBS that does this, it seems it's IBS and IBS m IBC is its own separate thing and they don't find that it's associated with antibodies to vinculin or cite a lethal descending toxin, whereas the other two are.

So I think and regardless of the underlying cause for IBS stress and the way like you said, that global heightened activated system inside like that is going to modulate the way that that IBS expresses itself.

So regardless of underlying cause, stress is always a player. You know, I, I think of stress is kind of like the elephant in the room that everyone's trying to ignore, but it's still there and you really can't get away from it.

And it's always going to have an effect on any internal disease state no matter what. And I would add to that that the more you try to ignore it, the more stress it actually causes inside of your body.

Because you're you're you're trying to I mean, you're trying to to stuff it. You're trying to ignore it, and the body's trying to communicate with you the same thing.

What I would say with stored trauma patterns in the body, the more that we actually ignore it, it actually gets louder

because it's trying to get our attention of, hey, like I'm not doing well, I need something from you and you're ignoring me.

So I got up really quick. It was Dr. who did the research and found that IBS can be categorized from the bacteria. Shigella. E Coli. Shigella? Yeah. Shigella was the missing one.

Yeah, that's the one I was saying fascinate. And and given the prevalence of autoimmunity with stress and trauma, I'm not surprised. Right. I think it's like we need to we need to redefine, you know, what IBS is totally and and recognize that it is a know in a subset of IBS patients.

It is an autoimmune disease, it becomes an autoimmune disease. So it needs to be managed in the same way that other autoimmune diseases are managed. And I agree with the research of Doctor Dr.

Scare talking about the vagus nerve, and that's been a really big thing and a huge realization with the work that I've done with patients as a gut health expert for the last decade and also in writing my my second book, The Gut Smart Protocol, is that it doesn't matter how good the diet is, it doesn't matter if you're taking like the perfect probiotic.

You're taking like this leaky gut formula and you know, you're doing all the right things. And yet I've seen those patients still be sick because they're not dealing with their stress.

So and I would say not just the stress, but the trauma, the stored trauma in their body. Yeah. That the stored the stored trauma inside the body, which a lot of times in housing.

Stress. Causes causes stress. And, and a lot of times it's felt in the lower abdomen. Absolutely. In that those lower areas, because, you know, there might be stored trauma from childhood sexual abuse or from, you know, even just verbal abuse, like having I've known many patients over the years where their their childhood trauma was just being yelled at by their parents and being told that they weren't worth anything, you know, and that trauma then gets stored in.

And I think we feel I like to say and I know this is a bit more spiritual, not as scientific, but I like to think that we digest our emotions in our gut and, you know, it's our intuitive brain.

But I think it's also our feeling in the brain. It's where it's where we physically, viscerally and feel things along with our heart. And things can get stuck there.

From the little enteric nervous system that is essentially like the, the ending of the vagus nerve that becomes this whole second brain. Which has, which has more nerve endings than our own brain.

And I think and I think actually greater wisdom, you know, I like I, I think instead of calling it our second brain, I think we should call it our first intuitive brain.

The intuitive brain the first and yeah. It's our first. We actually have more than one brain. And when you when you really tune in to and listen to your intuitive brain, which is down here, I think you make better choices, you know, following that in the heart brain, like listening to your heart and what your true desires are.

And also just just like being really intuitive about knowing what your body needs and what your mind needs and, and what your healing path is. Because I think a lot of people can get stuck listening to a lot of the experts.

And I think it's important, you know, and here we are, this incredible summit that you put together. But I think it's important to take all that information and then be intuitive about what is the right step for you, what what applies to you.

You know, listen, listen inwards. Well, and when we look at the healing journey, Dr. Pedre, like it's a mountain. It's a mountain to climb. And just that can be overwhelming.

And I've seen so many people just kind of get frozen and paralyzed with, oh, my goodness, there's so much to do. Yeah, I don't feel like I can do anything.

And so being able to just focus on intuitively what is your next best step, just what is your net? Even even in that moment, like what I teach people is like the best thing that you can do is just breathe.

Yeah. And but not breathe here with your accessory muscles, but breathe with your diaphragm. Like fully take in an embodied breath that goes deep into your lower lungs and that's going to activate those stretch receptors that are going to send a signal to the vagus nerve that's going to activate the vagus nerve.

And it's going to help get you into that more relaxed state, which is so important for healing. Healing can happen if your body is in a hyper wired state, like you said, like globally hyperactive autonomic system.

It's not going to be able to heal. And that's probably one of the most important pieces for healing. I wanted to share. I wanted to share a study that I think you'll find really interesting that came out in I think it was published in December of last year in In Nature, so December of 2022 and it was a study where they took 45 peoples was a small study.

I think they did it during the pandemic so they couldn't recruit a lot of people and they wanted to look at perceived stress score. So they, they used the a measure called the Cohen's perceived stress score.

And they took this group of people, divided them into two groups, measured their perceived stress. And now these were healthy people. So we have to think, you know, can can this be applied to people who have trauma of any sort or like really, you know, hyperactive limbic system or autonomic nervous system.

But I think, you know, it's a start. And so what. They do think that that all people have had trauma. I think that's a universal human experience, whether they recognize it or not.

I, I do I do agree with that. That there's there's many traumas, you know, there's. Many types. Of party trauma. But they all they all have an effect on us.

And so they they divided into two groups. This was in Ireland and one group, they gave them very specific dietary guidelines. And they were looking at what might happen in the gut microbiome and what would happen to their perceived stress score without doing any sort of psychotherapy or mental health healing during this four week protocol.

So the the intervention group was told to eat 5 to 8 servings of fiber per day. That amounted to about 40 grams of fiber, whereas the average person eats about 10 to 15 grams of fiber and they were asked to increase their intake of fermented foods.

So things like yogurts, sauerkraut can be like vegetable, like sauerkraut juice to 2 to 3 servings per day. So they they had a big increase in these prebiotic and probiotic rich foods.

And the other group was just told, you know, avoid sugar, you know, don't eat any processed foods. But they didn't really give them any guidelines on increasing their fiber or whatnot.

And at the end of the study, they they looked at their perceived stress score again.

Healing Tools and Closing Remarks

And the fascinating thing is that the intervention group dropped their perceived stress score by 32% in aggregate, whereas the placebo, let's call them the placebo group, the group that didn't have the full dietary intervention, they dropped their stress score by 17%.

The difference was great enough to say this is a significant difference, that we need to start paying attention to how

the diet is affecting the gut microbiome and in turn affecting brain health.

So they they went a little bit further and they looked at the they were asking people to log their compliance to the diet, and they found that compliance was quite varied.

So it was anywhere as in anything, it was anywhere between 20% and 80% compliance with the the intervention protocol. But I think this this actually offers a lot of hope.

The people who were 80% compliant had the biggest drop in their stress score. So, again, you know, there haven't been too many of these dietary interventions looking at the gut microbiome, at what happens to the gut microbiome, and then how does that affect our brain health in any way?

But this is one of the first ones I've seen that looked at what we call a psycho biotic diet, a diet that is high in fermented foods and fiber and how it affects the brain, which I talk about also in my book.

Fascinating. Fascinating. And for the listeners, if you want more information on this idea, listen to Luis Mojica's interview where he talks about diets that will actually help metabolize adrenaline.

And that's exactly what Dr. Pedre just said, the fiber, the fermented foods. And it actually helps metabolize stress, metabolize adrenalin. Fascinating.

And for me, it also gives me a lot of hope. Right that, that there's a lot that we can do. And to validate your point, even more highlight the the importance of what you're saying in those who do a 21 day journey with me.

And we're just doing some basic somatic exercises. We're not even looking at the diet yet. That's the follow, but just the basics. Somatic exercise is 21 days so that you're actually learning how to modulate and regulate your own autonomic nervous system.

Vagus nerve. People experience a 28% decrease in GI symptoms in just those 21 days, and imagine if we combine that with the diet stuff, right? Like and for me that's where I just start to get goosebumps all over of the possibilities and the solutions that are actually available to people.

Dr. Pedre, where can people find you? The best place to learn more about me is website gutsmartprotocol.com and I'm very active on Instagram @Dr. Pedre Pedro a d r Pedro E.

I try to post a lot of fun educational content there to inspire people to live healthier lives by improving their gut health. I hope you enjoyed that interview and again, I come away with so much hope and this reinforces for me the value of being able to incorporate multiple modalities.

And for me, those modalities, the somatic work parts work and the biology work. And in this case I referenced the 21 day journey and that people experience a 28% decrease in GI symptoms just in these short basic somatic exercises that I lead them through.

Why is that? Because it's actually changing your physiology. It's changing your operating system. It's taking that vagus nerve and bringing life into it so that it's bringing life into the digestive system.

And just in that process, it's able to function better and help your digestive system function better. It's amazing. 21 days, 28% decrease in GI symptoms.

And imagine and then being able to bring in some of these dietary and biology pieces for me, like that's when the magic starts to happen and then we'll need to bring in some parts work, some different parts of you that experience different things or have different belief systems about yourself.

And that will be another piece. But just being able to bring in, looking at the changes that can happen with somatic exercise and the changes with bringing in more fiber and fermented foods and helping to actually metabolize

adrenaline.

Wow. Like the the accumulated effects is where I say that the magic starts to happen because they act synergistically and you can have relatively fast results compared to how long you've had symptoms.

You can have relatively fast results in a short amount of time. It's exciting. And that's why I put the summit on, is to give you these tools and this information.

Don't forget that you can purchase all these recordings because I do know that this is a lot and I want you to be well equipped and well resourced with all the information that you need.

Walking away from your clear path forward. And with that, I'm your host for this summit, Dr. Aimie, and you are at the Biology of Trauma Summit 3.0. Feel free to invite friends, family, colleagues to the summit.

And I will see you on the next interview.