Introduction and Background

– Hello everyone and welcome to the microbes and mental health summit. I'm your host, Dr. Miles Nichols today, interviewing Steven Wright. Steven Wright came from a background as an engineer and is now in gut health functional medicine supplementation.

That's quite the transition Steven. How did that happen for you? – Well I'm like, I think most people who end up in this space or at least deep in this space, I think life kind of chose it for me um I was born with gut issues, I had, you know I. B. S growing up, I didn't know that that was what it was. I just thought that everybody in my family was kind of gassy. Um and you know I had some normal things go wrong, like a lot of antibiotics and lots of beer and pizza and things like that.

But um I had a wake up call after college when my boss called me into his office and said, hey man you're the you're the smelly guy in the office and you have to get this fixed if you want to keep working here and you know he didn't know at the time, but after every meal whether it was salad and chicken or beer and pizza, I would have intense bloating pain like knives in my gut, which now I know is visceral hypersensitivity, it's a subtype of I.

B. S. That happened to some of us. Um And I would just cry at my desk and fart because if you're that bloated, you know there's only one way out of it and that's usually to fart and I was on the 16th story of a high rise, so I couldn't really escape.

So anyways that was a big wake up call. – Yeah. Yeah. And and the visceral hypersensitivity is fascinating to me because some of the research looks at at inflating balloons and it looks at the difference between the sensitivity in people and the same amount of pressure can have great.

Some people are in tremendous pain and other people don't even hardly notice it. It's incredible. – Yeah, it's really wild. It seems to be like somewhere around 32, maybe 40% of people with I.

B. S seem to have visceral hypersensitivity, but like you said, the same amount of gas to somebody else is just slightly annoying or normal. And for somebody like myself it's like curled up in a fetal position, crying, you know, hoping something will change.

So it's it's a pretty weird and crazy thing. – So you're growing up having digestive issues. As long as you can remember, there were some admittedly diet lifestyle things that were poor choices as many of us make and especially high school college years. And then you get to this point where you're you've gone down this career path of in Engineering and you're in the office and you get called in and you realize there's a bigger problem than you thought.

So what happened next? – Well I you know, I took it serious, I went to three different Western medical doctors in Chicago at the time who were supposedly, you know the best of the best and at least to their credit.

This was 2008, They did check me for Celiac genes which I don't have. Um but after they took my family history and ran some basic blood panel and check for celiac, they were like, hey man, you have a family history of I.

B. S. You're gonna need to eat whole grains, you can have antibiotics whenever you'd like them and you should take Metamucil um and otherwise please just suck it up, this is your, this is your life, this is what you come from. Uh And so I walked out of there um like resolute like okay I'm just a wuss, I should suck it up.

And and then a couple weeks later I missed a date and I was on the toilet all night with diarrhea and just crying, just mad like this can't be the rest of my life, you know, I think I was 22 or something at the time and uh I called a buddy from college who I knew had celiac disease and I knew that he was struggling with the gluten free diet and things

like that and he had found a diet that worked for him, he told me about this thing called the specific carbohydrate diet.

I attempted that very shortly after and in like one week about 50% of my bloating pain.

Early Gut Issues and IBS

like just disappeared and it was like a combination of embarrassment, anger and pain um and empowerment that I was like okay, you know, I was trained in this uh basically mathematical models and systems theory where you can't really see and measure everything you have inputs and you have outputs and you're trying to optimize, why can't I reverse engineer this, this, this can't be my life. And so it just became this sort of thing where every little step I got in a, in a better direction.

I kept asking well how much better can I get and why was it that way? And how come nobody else is talking about this? And so that led to a lot of blogging and different programs around leaky gut and things over the years, getting a training and functional medicine and many hundreds of thousands of dollars of my own just because I can't stop, I'm like I'm not normal in that I want to optimize, but I also don't want to opt in myself optimize myself into a bubble.

I would like to eat a sugar cookie and have a glass of wine and not really care about it. And so that leads one on a little bit different path than always trying to get the best of the best and kind of being in a bubble type of deal. – Yeah.

And and you and I are similar that early twenties health issue crisis, trying to figure it out thinking is something wrong with me. And that brings us to where this summit, its its microbes and mental health.

We're talking about the mental emotional side and there are a couple of angles to that and this talk is your gut may just change your mind. And one angle is that there's this there is a frustration with chronic health. And for me it was chronic fatigue for you, it was chronic digestive issues.

But there is a almost a subtle trauma that can occur when you're feeling like something's wrong with you and you can't do anything about it. And no one is telling you for me. I went to the doctor they said, oh your blood looks normal, Maybe you're just depressed.

And and I thought, well I don't know, maybe I am, but but I'm depressed because I'm tired not because like I'm happy when I have energy, you know, so like, like I think it's a different issue. It doesn't feel right to me.

And so so so it sounds like you were in that kind of frustration and struggle internally around your your physiological experience and that led you to understand the gut.

And then and then later I think some research based connections between the gut and the brain and emotion as well. – Yeah, yeah, totally. I mean I uh I was really full of rage, just about the western medical system and the amount of pain I was in um you know, it would come with no shock to you, but maybe it's helpful to listeners that I hadn't, I didn't know what a panic attack was, but I suffered my first panic attack uh the week I started that job in Chicago, and that, that conversation, my boss was about like three months later, I didn't know, I didn't know what anxiety was. I had no, I didn't even know what a panic attack was. I just remember walking and all of a sudden the skyscrapers like sort of swaying and my heart rate was racing and I was just walking to work and I didn't know what was happening.

And then shortly after that I had about a six month depressive episode that led to, you know, me trying to cope with 1/5 of alcohol at night and just crying and you know, I had just gone through a breakup with the woman I thought I was gonna marry and move to a city by myself. So, at the time in which I would describe my gut Being the worst of my life, high stress, high emotions.

A lot of upset. I was also experiencing the worst mental health of my life as well. And I think those things are now, I can definitely say from the research and from my experience, those things are 100% linked. And usually what's

happening in the gut is also happening in the brain or vice versa, depending on which way you want to focus.

– Yeah, and for me I had severe fatigue and brain fog and then I had no digestive symptoms, but when I did still testing, it took me to still testifying that I found H pylori and I started to and then I found parietal cell antibodies and then and it it just went on and on where I realized, oh wow, my gut is involved in this.

Even though I don't have digestive symptoms specifically. So I want to make it clear people don't actually have to have digestive symptoms for changes in the gut territory to make a difference with clarity with brain fog with depression with anxiety.

So that was a roller coaster for you. You really went through the wringer there mentally, emotionally, physically, it was getting in the way of your your social life, your your dating life and your well being and your ability to make good decisions with alcohol and things like that. Just trying to cope, just trying to get through. And so what was the breakthrough for you?

I know you mentioned the specific carbohydrate diet and that got you started and and and down that road and then studying functional medicine. So is that really the breakthrough moment for you? – Yeah, yeah.

Starting the diet. I mean I didn't study functional medicine for another three or four years later. Um actually, immediately after that, I've actually been taking supplements since I was like 12 or 13, I got picked on a lot and I wanted to gain muscle and so I started taking creatine and um and so I've been a fan of supplements a long time and and so it's natural for me to start googling what is what helps with gut health. And so I actually found Bt N HCl like a week or two later from a guy who sadly passed on Charles Paul Quinn was using an Olympic athletes and he was blogging about how these athletes were using this gut health supplement to get more protein and have better performance. And I was like well if an Olympian takes a gut health supplement, I surely should take a gut health supplement.

And so um that gave me a little bit more, like I had low stomach acid for sure, it totally helped my bloating and my my digestion.

Mental Health Struggles and the Gut-Brain Link

And so it just was sort of one step after another and I'm someone who enjoys trial and error. And then if it works for me, I try to tell other people about it. If there's all some science behind it.

And then if it works for more people then I get really, I kind of start to climb on a pedestal. It's hard to shut me up. – Yeah, we're both pioneers in that way, I try weird things on myself that I wouldn't recommend anyone else until I experience the benefit, Okay, now recommended to a few people and then if a lot of them have that benefit, then it's like okay now we're putting into the practice and making a system around it.

And so that's that's amazing. So I'm really curious because and feel free to if you want to go more into the story, you can also I know we want to talk today about para probiotics and what makes those different than regular probiotics, so feel free to give us a transition there if you'd like or just jump right in.

– Yeah, so I mean look, I I um I would now consider myself as someone who struggle with generalized anxiety disorder for much of my life and I still um in one of those people who I can wear blue blockers, I can have full blackout, I have an eight sleep temperature control. I have everything I can work out that day.

I can sunlight, I can do it all and I can be so tired. I lay my head down at night and then it's like fireworks in my brain. It's like, what about that study? What about this formula?

What about nuclear war? What about this? And I'm just like where is this coming from? I just want to go to sleep. Um And so I'm not, Yeah and so I'm not gonna sit here and say that I have it all figured out.

I'm just somebody on the journey trying to handle this and I have done a lot of things from the the supplement and

the nutrition and the pharmaceutical side and I also did not get as much mental health help until I actually went into the trauma and the emotions and psychedelic side and integrated the two. And so um while I think this talk we're going to focus a lot more on um maybe gut bacteria and hopefully at the end we can kind of close with maybe some of my favorite sleep tips for people who might have some of this anxiety.

I do want to just say it's all, you know, it kind of all comes together when you're dealing with with mental health. Um and does start in the gut in my opinion.

– Yeah. And and thank you for bringing that perspective in and and and who knows, maybe we'll get there a little bit because I do think that that I've seen tremendous benefit because in my practice I deal with a lot of people with severe gut issues and Lyme disease and and mold illness and the neuropsychiatric symptom picture is significant. And with functional medicine, lab testing and supplementation and nutrition and lifestyle, we can get so far and we can do a lot.

But if people don't address and you know, my approach to functional medicine, I call it mind body because if people don't address doing some things like breathwork, we're gonna have some breathwork experts on the summit here to talk about that and doing cold exposure and looking at meditation and looking at brain retraining and psychedelics are a really important part for many people to have a much more well rounded approach. And what I what pains me personally is that in the traditional conventional model that a lot of people struggling with mental health concerns are given two options. It's it's counseling and psychiatric drugs and those are the only two options. And unfortunately the success rates of counseling are quite low and psychiatric drugs don't tend to address any of these microbial imbalances that are at the root cause in many cases or the inflammatory burden that can be at a root cause for mental, emotional and I'm so glad we have these interventions and they can be lifesaving and I recommend therapy and I recommend there are some people who really do need psychiatric drugs. I'm glad we have them, but it's so inadequate and it it and when people think it's the only option, that's where I feel like, okay, this is gotta change.

We need to do something, we need to educate people. So how does the gut fit into this and how do para probiotics fit into this? – Yeah, so, um, so the interesting thing about the gut and the brain is we have um, like direct linkage through the enteric nervous system and uh there's plenty of data now that shows that essentially what's happening in one area happened to the other.

So we have, for instance concussion data, you could be going along your life totally healthy. Get in a car accident or maybe you're in a skiing accident or something.

And as soon as you have a concussion you have leaky gut basically and you have a leaky blood brain barrier and so the same proteins and cytokines and compounds that sort of affect the gut also end up affecting the brain. And so if you're someone who identifies with having I. B. S. You have bloating, constipation, diarrhea, these sort of pains, maybe heartburn, things like this.

It is likely that the inflammatory process and the root causes of what's going wrong in your gut are also being manifest in the brain and the same sort of way that you can make a like a chiropractor, can can make an adjustment in your physiology and you can feel a release in your gut or release in your well being the same is true.

If we can make effect in the gut we can typically feel that in our mind or in our brain. And so there's data now suggesting that our like our immune system.

Like I like to think of like video game terms, not that I play a lot of video games, but I think it's very visual and if you had like 100 little immune guys who are like your immune cells running around trying to you know, help you all 80 of them would be packed right around your intestines. Like they'd be all huddled up right there in your abdomen, around your intestines. The other 20 are just kind of roaming around but there's plenty probably up in your brain, there's another 10 or so up there.

And so what's interesting is that if we can affect the gut and the immune system it will travel directly to the brain and make impact. And so there's research looking at like uh if you you know if you have some sort of viral illness or

something like that and it causes an increase in aisle six which is a sideshow kind which is sort of just like an inflammatory messenger that that messenger is gonna race right up to the brain and start to cause some issues up there. And so the the inflammation pathways.

I think it's really important to get that they're very bidirectional um from one to the other and that sucks. But it's also a really cool opening for us to be able to take things orally or do different practices in our gut that can then therefore almost like in a month or two directly impact the brain sometimes.

You know even quicker than that. – So we know that that that brain issues T. B. I.

Diet Breakthroughs and Functional Medicine

Concussion can impact the barrier to the brain and the barrier to the gut and we know that got interventions and changes in the bacteria in the gut can impact the brain from as you mentioned, the nervous system connects to we have the vagus nerve that sends signals from the gut to the brain. And even the American psychological association has come across saying that a majority of the neurotransmitters produced in the brain are due to signals from the gut that are telling the brain what to produce.

So it's not so separate and we have this bidirectional relationship which is amazing. So with that bi directional relationship it sounds like you're saying that.

Well if I do something orally in the gut then that can impact the brain very significantly. Is that right? – Yeah. Yeah. So um if we think about, I like to think about the immune system almost as a communication pathway.

It's almost like a like a WhatsApp or facebook messenger. Okay. And your brain is on one end of the terminal and your guts at the other end your immune system is just a repeater system, It will repeat out to your skin, it will repeat to your eyes, your your gums and your brain.

And so whatever happens in the gut will be repeated out to the body and these sort of wave systems. And so if we can do things to calm down inflammation or calm down our immune system in our gut, we will often see the exact same thing happen in our brain and I guess I sort of glossed over the idea that there is a significant amount of data suggesting that at least one large subtype of depression is directly inflammation based. And I'm not going to say it's all of depression and I'm not gonna say it's every depression case, but it does appear that high amounts of inflammation, high amounts of cytokines are directly implicated for a giant part of the depression subgroup and similarly also much of the, the anxiety subgroup.

And so if we can reduce inflammation or eliminate the sources of inflammation and these messenger cytokines, I've seen it in practice. I think you've seen it practice that we can have mental benefits happen very quickly. I'm not saying you're healed, I'm not saying you're cured, but I'm saying that if your baseline is a really, really dark place or really anxious place, you could get a couple steps up on the ladder of resiliency back in a in a short order such that maybe things like therapy or these other things might stick more, they might give you a better opportunity to handle some trauma or some emotions or your environment or things like that.

And so with that being said, focusing on the gut and these inflammation pathways through the immune system is a way that that probiotics, para probiotics are microbes can really change the way we feel like I said very quickly. – Yeah, and that is really important.

That cytokine theory of depression and it's very well documented in research that that that subset of depression, a good chunk of it has to do with inflammatory cytokine proteins.

And we see these inflammatory proteins rise as people's depression gets worse and fall as people's depression gets better and very clear research based link for a chunk of people who have and are struggling with and have been struggling with depression even for a long time.

And so modulating these immune and cytokine based systems in the body really can impact that depression and

anxiety quite a bit. So thank you for sharing that. And I think that's a really important point for the audience to realize that immune and inflammatory connection with mental emotional issues. How do para probiotics then?

What are those? How are they different from regular probiotics? – Yeah. So a lot of people are aware of probiotics now and I'll just quickly define them in case they're still confusing for some people because I think they are but these are just generally considered alive, beneficial bacteria. And um para probiotics, para is a is a word basically meaning dead. And so para probiotics came about in the last 20 to 30 years starting in Japan when researchers were asking the question, how do probiotics do, like what they do and what happens if we change them?

What happens if we kill them? What do they do in mice and rats? And then is that repeatable in humans? And what they found was that they could give the same strain of probiotic one alive and one dead.

Two mice and rats. And they would see different effects. This would help with some things and not with others and vice versa. And then they did it back, they did in humans and they repeated it and the same became true.

And so now what the research has been showing for all types of strains of para probiotics is that para probiotics tend to um seemed to affect the immune system.

Mast cells, histamine system worse versus the live bugs seem to affect like more the mucosal membranes, the sort of I. B. S. Like symptoms. And they might be able to change the mixture of microbes growing inside of you sometimes.

And I think that's really important because most of what we've been doing for the last couple of decades is trying to maybe change the mucosal or change the micro mixture.

But there hasn't been a lot of work or study done on what happens if we change the outside world and the inside world its tolerance, its relationship to itself.

And so para probiotics are essentially modifying the gulf, the gut associated lymphoid tissue. They're modifying its relationship to what you're eating and what you're breathing and what you're drinking by giving it dead bugs which are essentially new information telling your immune system to do different things.

– Yeah, I love this and and I I remember back when I first saw some of the research on these heat killed probiotics that had this immuno modulatory effect.

And I thought that's interesting. They're not they're not doing it by residing in the gut for a long period of time, like what's happening here. And and as you're mentioning the mechanisms that play, I'm thinking about this this consciousness corollary to the immune system which is supposed to identify threats and get rid of the threats but not attack its health ideally.

How Gut Health Affects the Brain

Or else we get autoimmune disease and on the consciousness side of things which I think is really useful to pay attention to and understand. It's it's sort of like what's what's you and what's not you.

And and it can sometimes get hard to differentiate that a lot of people buy into the voice in their head as who they are or they think about the physical body and identify so narrowly with that and the emotions and the thoughts that they may be.

Forget about something bigger. And also there might be leaky boundaries if people aren't creating boundaries and they're thinking that that that wanting to please another person is doing it for themselves. And later they realize, oh I just wasn't doing that for myself appropriately in my life.

And so the immune system, it's almost like that on the physiologic side it needs to recognize what self, what's not self. So we don't attack self but we do get rid of what's not self and make sure that we preserve self and that these

bacteria that are he killed seem to give information about some things that aren't self and that that that ourself and it's helped educate the immune system in a way would you say?

That's true. – Yeah. Yeah. I love I love that analogy on many levels, probably too many levels for this. This one talk. Um, but yeah, yeah, definitely. The uh so the the heat killed probiotics essentially, each different type of strain seems to maybe drive a different part of the immune system. So for instance, there's uh there's one type called amuse, it's a lactobacillus, lacked a strain that drives up the activity of something called plasma site oid dendritic cells. And these are these special type of dendritic cells that are sort of like commanders in the immune system.

They will they will tell the adaptive immune system to change its behavior. They will tell the innate immune system change its behavior and they help transfer information between the two systems. If you have more of these cells activated, the studies show that you you tend to recover from exercise performance faster.

You tend not to miss as many workdays. You tend to not fall sick after you do exams as college students. Um there's some really cool reductions in inflammation markers and increase in natural killer cells.

And so by essentially modifying this one type of mechanism in the immune system. We can kind of bring a little bit more balance between the adap in the innate immune systems which I think is something that we're all sort of struggling with not only you know in this post pandemic world but also in this Western world with more and more wifi and toxins and chemicals and things like this, our ability to use a, well it's actually our immune system's ability to use a feather if a feather is needed and a hammer if a hammer is needed is becoming increasingly important.

And I feel like some of the mental emotional issues coming from the gun are because the immune system's a little confused about which tool it's supposed to be using at what point during the day or during the year. And so if we can use these para probiotics that help sort of retrain the tool set of the immune system, then we can usually feel that and also deal with our environment in a better way. – Yeah. And there are some other talks in the summit that have gone over a connection between systemic infections, some local in the gut, but also systemic like Lyme disease and Barton ella and certain viral infections that we know have a link a cross reactivity with the brain auto immunity where the immune system can get dis regulated and start attacking dopamine receptors and turbulent and other brain structures and actually attack the brain structures and change the neurochemistry in the brain as a result of trying to kill the infection.

But that cross reactivity that inadvertent attack against brain tissue getting mixed in and so with para probiotics. Uh I think what you're saying is they're they're immuno modulatory meaning they're going to help the parts of the immune system that defend against infection but they're also going to help maybe tone down the parts or balance the immune function around autoimmunities.

Is that true? – Yeah. Yeah. They really are and I know sometimes this is hard to understand because it can feel too good. True but they really are adapted genic in that way. They really do seem to dampen down.

For instance, let's say someone has like hay fever, they have a lot of allergies to the outside world that is typically associated with something called th one dominance in the immune system. And I don't know about you but I did have allergies when I was a kid. And it's really hard to think if you're if you're full of snot and you're you're having all these sneezing attacks, it's it's you know, there's clearly a brain component there as well.

And so the cool thing about some of the strains of the para probiotics, they can actually dampen down by building more t helper cells to sort of bring down the expression of the th one immune system and conversely auto immunity is typically considered a th to dominance. And there's also para probiotics that that will build t suppressor cells and bring down the th two if it's too overactive and that is again where were you can think about it like um he killed bugs.

But I love the analogy since we're talking in a more global consciousness way as you're really giving it new programming data or new programming language, you're essentially saying, hey immune system, it's okay, it's okay like calm down this one area actually raise up this other area because you know, it's been a long fight against this, you know, Epstein Barr or whatever.

We still got to go through it, you know, So bring that back online, things like that. And so it really is talking at a at a different sort of metal level to your immune system about what his friend and what is foe and how we should respond to that.

– I love that and I encourage patients in the clinic when they're taking supplements, not just to like take them and not think about it to actually try to get into a state or utilize metaphor here. So I love this conversation because if someone's taking a para probiotic, they could they could think about a feeling of being adaptable and flexible and being able to understand self versus not self and getting really clear on that. And I mean I don't know, but I I would expect that might increase some of the placebo even or amplify the effects of the physiologic that we know is already happening, but can we amplify that through the mind is really of curiosity to me. So we're living in stressful times.

We're living in times where a lot of people are overcommitted, they're busy. That's hard to like get everything done. And and there's a lot of pressures in the world has had these changes.

Probiotics vs. Paraprobiotics

We know stress is often things that are novel things that are unexpected, things that feel like a threat past few years, we've had a lot of that people don't necessarily even sometimes feel safe in the world when things have happened like that. And when the mental issues are there, there's loneliness is such a big issue. Social isolation is such a big issue.

The studies showing social isolation equal to Smoking 15 cigarettes per day in terms of risk factor and for disease are we're dealing with a load of stress and it's contributing to this Alice static load. How in this stressful world can para probiotics and para probiotic strains? Um and anything else you'd like to talk about help this situation?

– Yeah, well, like I said, the product that I formulated holo immune contains three different strains of para para probiotics. It's the only one of the market that contains multiples. And each of these strains has been studied to uh some version of a human study regarding stress and not losing time to sickness or recovering from athletic performance. And so I think what that says is that life is hard. There are times where life is hard.

No, nobody gets out of that game. And when life is hard, it's a good idea to have some support on hand. And so let's say you don't have you know, whole immune or a pair of probiotic on hand. I think one of the other best ways to get some data into your immune system on a daily basis is fermented foods.

So get some you know, real sauerkraut, some other real fermented veggies, whatever you like to do and get that in your body on a regular basis. There's a lot of data suggesting better outcomes in the microbiome diversity and other other markers we would associate with lowered inflammatory markers and a better gut profile.

And so while I think taking care of probiotics is amazing and if you're struggling this area should be something you maybe test out. Um it's as simple as maybe getting some fermented food, getting some dirt on your hands because that again that that crazy wild fermentation process is is data, its microbes and they are bringing in um this sort of data stream that you don't currently have on hand and the same thing with dirt or petting your dog or your cat or whatever it might be. And so if you can refrain from sterilizing everything which I know is controversial um and get some of these wild types of information into your life, I think that's going to also help you build a better gut and build a more resilient brain. – And I was surprised because I know there are a lot of researchers in the microbiome world in the gut bacteria world that are talking a lot about fiber being food for bacteria and bacterial diversity, requiring really high fiber.

But that can be hard for some people who are dealing with small intestinal bacterial overgrowth which can get much much worse from increasing fibers. And there's a lot of good despite aosis and some of it does not tolerate fiber well.

And I saw a study that looked at a comparison between the impact on microbe microbial diversity with fermented foods versus high fiber diet and it found that fermented foods even outperformed the high fiber diet, which I thought

was really interesting and really promising for some people who might struggle some with fiber and who so I appreciate that you're bringing up fermented foods which again, there are some histamine issues and other people may not tolerate those two but I find them to be much more tolerable in general than high fiber diets for people who are struggling with gut issues.

Have you found the same? – Yeah, yeah, 100%. I love that study. That was a really cool study. And yeah, you know what you're right. When I was in clinic and people were really in a bad place, I actually pulled them off all probiotics and off all fermented foods.

Um they can introduce a little bit too too much intensity for for a subset of people. And so um I think it's worth taking a little side tour here into what is one of the biggest outcomes of fiber probiotics in fermented foods. And one of the biggest outcomes is this thing called short chain fatty acids. So are are probiotics or a microbiome eats up that ferment herbal matter. And it basically poops out a bunch of metabolites and the biggest class of those is called short chain fatty acids.

And the most important of those is called butyric acid and butyric acid is really important for almost like everywhere we study. So like, you know how everywhere you look for magnesium deficiency, you find magnesium deficiency is linked to this and that everywhere you look for. Um basically butyric acid and something, whether it's lung inflammatory pathways, whether it's blood brain barrier and degenerative diseases, whether it's osteo class and bone development.

They're finding it everywhere they look. It's kind of like the, I don't know, the magnesium of the microbiome where if you have enough butyric acid, you're probably healthy. You're probably stable things are probably going pretty well for you if you don't have enough of it.

That generally shows there probably a lot of other things going on. And so the cool thing is there's been advances in the last few years where you can now take butyric acid in capsules. If you're in that place where you're having a lot of anxiety depression. You're also exhibiting a bunch of issues with bloating and intolerance to foods and fibers. We can kind of do an end around to what is one of the most important things that microbiome is gonna make from that and stabilize a lot of things. And then hopefully again, I'm a bit big believer in trying to like get a few rungs up on the ladder so you can get a little perspective and then deal with maybe something else that was a little too confronting are a little too hard to do at that time. So maybe just getting rid of that gut pain or you know, people who take butyric acid typically have a lot less histamine related issues, a lot less mass cell related issues. Food sensitivities maybe that just allows a little bit more flexibility. Such that maybe exercise is now available and we know that exercise is highly correlated to a better brain.

Um and so I think there's some really cool things we're gonna start seeing here between the gut brain and modifying the microbes and what the microbes give off.

– Yeah. And I'm glad you brought up butyric acid and short chain fatty acids because I do a lot of stool tests and I don't find that most people have adequate amounts of in particular butyric acid and I do find it to be so helpful and not just in gut issues, but and especially if people aren't tolerate fibers, they're not going to make as much. So taking it supplemental e can be helpful but also in mold illness. And I use a lot of butyric acid and mold illness because it exchanges fats and some of the fats in the body are where the body can buy. Accumulate toxin and so that by accumulation of toxin we want to exchange the fats and that can help to and reducing cardiovascular risk. I mean like you said, you you think about what what isn't connected to this instead of what is so short chain fatty acids are something that is produced by the gut. But then it's connected to so many different systems in the body.

Now, what else? In terms of this stressful world?

Immune Modulation and Inflammation

Aside from para probiotics, fermented foods, butyric acid, what else might be helpful on maybe an herbal front or or how can we better help people with stress resilience. And even if you want to go into the consciousness side to what can help people with stress resilience and building up because let's face it, we're you can't in today's world

very easily eliminate all the stressors and so you know, eliminate the ones you can that are significant.

But how can we utilize either an internal shift in order to talk about being able to make stress be helpful stress that that motivates that that that improves our abilities to handle life or how can we modulate the systems that deal with stress in the body and the HP.

A access Yeah. I mean I think again, I'm a big believer in trying to get like a breakthrough such that it unlocks a different possibility for an individual. It's just my family, my friends, past clients, things like that. And so um, what I would say is probably the top tip I could give someone to walk away with from this talk is that if you've been um pushing towards one direction, for instance, you've been pushing towards mold and and detoxing mold, um, there is a law that you cannot escape called the law of diminishing returns.

It's also a mathematical model that essentially says the farther you get towards 100% effect, the more effort you have to give to even get 1% better. And so for instance when I, when someone comes to me and they've been on a bunch of different diets and and they're wanting to know what they should eat and what they shouldn't eat, I refuse to talk to them about food. I said your your breakthrough, what you're wanting from your digestion and your health will not be found in food.

You've already tried like three or five different diets. Let's just make sure you're on a basic healthy diet and let's look at why your organs can't process this food or what your central nervous system is doing to not allow it.

And so when it comes to the mental emotional game, I would say that if look if you're, if you're already on a host of supplements or you're already doing some detox protocols, try try maybe some of this gut stuff or maybe try some adapted genic herbs if you haven't gone down that rabbit hole because if you can go in a different direction, your probabilisticly much closer to a breakthrough that's gonna give you a couple rungs on that ladder of well being, then continuing to dive down the pathway you've already been on for a while. And so um there is a really cool type of herb called adaptive genic herbs. And essentially again these are herbs that have been used for centuries and you're probably more of an herbalist than I am at this point.

But essentially they work in different pathways and they have lineages, whether it's chinese medicine or ayurvedic medicine where they're going to raising up parts of your body and lowering parts of your body that are out of balance.

Again, their whole goal as a plant is an adaptive genic herbs to bring balance and a cool herb that I've learned about that. It's really helping me with my anxiety is called Mahlangu and it hasn't been really westernized too much yet.

It comes out of brazil and peru and it's been used for centuries by the medicine men and the healers down there and I had a good friend who who was basically having social anxiety, couldn't go into the supermarket anymore. And he has access to, he's an MD has access to everything from the western size and he also has access to all the cool, you know, normal adapted genic herbs we're familiar with and he couldn't find a formula that would work for him. So he thought he needed to go do ayahuasca.

So he goes down to these, these medicine men and they're like, oh no ayahuasca for you drink this Malone Guti and so he drinks this, this Malone Guti and he's finally able to start to just be with the world.

And so I think um you mentioned something that is really important and it's cool that's coming up now. I don't get to talk about it much, but it's called the zone of tolerance and I forget what um lineage of psychiatric or coaching this comes out of, but there's this idea that our nervous systems are always in a zone of tolerance and if you have a large zone of tolerance then you can tolerate different things. The dogs barking during a podcast, The kid is sick and you don't get, you don't get bounce from life, You don't have to eat chocolate, You don't have to drink alcohol.

You don't yell at anybody, you're just like, cool, I'm, I'm in flow. This isn't what I expected, but I'm flowing as we report more and more depressive and anxiety symptoms are zone of tolerance shrinks and then if we get bounced out of our zone of tolerance typically that's when we exhibit panic attacks or major depressive disorder moments or

other just melt down through your like I'm just done for the day and that's because we're too far outside of that zone of tolerance.

So if we can use herbs or some of these other protocols to increase our zone of tolerance, not only does that let us lead just a normal, more regular life, but it also gives us the opportunity to confront for instance the barking dog or the the kid from a different perspective and have a different breakthrough.

And so I think what Mahlangu and many of these adapted genic herbs can do in the right dosage is in the right formulas is widen that zone of tolerance in your nervous system to let you be more you know you and be more in tune with life.

Stress Resilience, Herbs, and Zone of Tolerance

And so um lingo tends to seem to work on the gaba receptors and the nicotine receptors in the brain to basically help aliven them or dampen them depending on where they're at and they're still trying to figure this out because I mean it's an herb and nobody has millions of dollars to study herbs so it's pretty new in the literature but the fact is they've been using it for centuries for anxiety and sleeping issues in in you know in the amazon and so I think whether um whether it's ashwagandha or rodeo ola which are pretty normal herbs to hear about or something more tailored towards anxiety and sleep like maluku giving some of these herbs a chance um if they come highly recommended and because there's a lot of for instance, not high quality herbs are sort of lacking the compounds needed to give you this hopefully trust what dr Miles says here in the brands he recommends, but they can really help you sort of either um calm down the excitatory neurons in the brain which is related to anxiety or amp up depressed neurons, which is normal for depression.

And so Mahlangu is one of the cool herbs that um that we are starting to hopefully popular lies here in the west to just again help people live more in relation to their lives, help them deal with stress, better sleep, better those types of things. – And thank you for bringing up zone of zone intolerance because this we do have this threshold and in a lot of people I talked to because I do work with people who are chronically ill and they come into the clinic and they say well you know I have tried these 789 diets and then there's there is that diminishing returns and I say well you know you've done five got protocols, you've been on nine diets and like we could test and probably find something and treat it on the gut side. But like let's look over here and because you may be close to diminishing returns there and then other people come in with lime, they've been working on it for years and years. And I say, okay, we're going to continue to work on that. But we're also we're not going to ignore were I mean you haven't addressed mitochondrial dysfunction and all the things that I've seen from your history. So we gotta address that too.

And then after we've removed some of the some of the the the onslaught of infections and toxins and inflammatory diet and some of these things that that are are creating this picture, this this al static load, this all these issues in people where they're at their threshold there, close to that tolerance level and a little bit can push them over the edge. Then then, you know, once we calm it down a bit, then how do we increase that that zone? How do we help people to have a bigger zone?

How do we help people to have a uh wiggle room? And like you said earlier in the talk, you want to be the kind of person who you can have a cookie and a glass of wine and it's not gonna throw you off base because you have enough of a window that even if that increases inflammation a little bit here, you're you're still below that threshold.

Below that inflammatory, global inflammatory, chronic inflammatory level. And same with stress and mental emotional on that nervous system aspect. So I love that you're talking about building resilience and I think a lot of people forget to do that support the good build resilience and that's important.

So thank you for bringing that up now, is there anything on the consciousness side before we summarize and wrap up here that you'd like to bring in? I want to invite that in if you'd like. – I mean I think what president for me just now in this talk is um what I found myself reflecting on a lot lately is uh there's it's really easy, especially with the tools of technology that we have today to find bad stuff and if you read the journals of philosophers and thinkers over the years um going back many thousands of years, pretty much even in the Greeks time they were writing about how the end of society was inevitable, like humans were about to collapse.

And so the Greeks wrote it, the romans wrote it uh the you know the medieval times wrote about it and we've wrote about in the seventies were writing about it again now.

And so well I do, like I said, I do have sleepless nights and I do have uh sometimes I struggle with my own nervous system calming it down and just reaffirming that like yeah, there's there's things going wrong in the world, there's some things to be scared about and I do think we live in um probably the safest and most uh we have the opportunity to have the best health potentially ever and the longest longevity ever.

As humans And some of us have to pay a hefty price for that like myself, like you probably people listen to this right now and I've gone through my share of long nights of cursing my genes and my family lineage and my family traumas and and the world.

And, and yet I hope that there's times where you get to see aw in nature where you get to remember that it's all okay. And that now is still a really wonderful time to be alive. And they're still really good things going on.

And there's really amazing tools being developed, being talked about on some, it's like these by people like me and you and others who are really trying to help us all through these times. So I hope people can keep that in mind.

– Absolutely. And my belief, and it may be naive, but my belief is that the natural healthy state is a state of awe, is a state of wonder, is a state of curiosity, is a state of love and compassion just emanating forward. And if that's not there, it's, it's, I think it's, it's, I think it is there.

I think it's underneath a bunch of stuff that's been put on top of it and the body wants to heal, it's ready to heal that it is the, the inputs and the outputs and lots of stuff that are getting in the way of it. But I think it's a natural state and at least that's my belief and I really want to encourage people to, you know, take time celebrate your wins and be grateful for what you have.

Don't always think about. Sometimes I feel like people who come into the clinic or who are dealing with chronic health struggles. Sometimes I feel like there I get this image there at the bottom of the hill and they're looking up and it's like I want to be there, I want to be healthy, I want to be energetic and and they don't take a moment to to look back and see how far they've already come and that they're not bedridden in the hospital.

There there there there at least waking up in the morning and getting moving and there's a lot of good that gets ignored. And so I thank you so much for bringing up the aw, bringing up the the parts of being able to celebrate in life that's so important.

Closing Thoughts and Resources

So I'd like you to to summarize here any what we've talked about and and what next steps people can do and then let people know how they can find out about you and your company and and get in touch.

– Yeah. So I mean, to, to summarize, I would say, um what is happening in your gut, whether you feel it or not is typically happening in your brain and vice versa, whether you identify with those things or not.

So if you identify of having a fire or a problem in one area, it's also silently happening in the other and the linkage between the two is oftentimes the immune system and so anything that can interact with the immune system and help it reduce its over reactivity or it's under reactivity is going to help either end of that spectrum and so on top of that, if you're someone who's listening to summit and you're deep into trauma work and emotional work and therapy and that's like your jam and that's what you know, and you have all the body, keep score books and you've read all that stuff, it's probably time for you to handle maybe gut health or maybe mold toxins or go in the direction of, of physical well being, maybe look at N A D or something like that.

And if you're somebody who's been, you know, deep into supplements and detoxing and killing and diet, it's probably time for you to go in the mental emotional realms and go open that box of emotion or trauma or spirituality or whatever is open because that's where your breakthrough is likely to lie. Um and then if you are, you know, if it's

time for you to head in the direction of gut health, healthygut.com is the company that I founded and where we're at, that's where we have products like hello immune that can help sort of rewire an immune system that might be a little dis regulated through the gut.

That's where we have products like be serene and be serene instant relief cream for people who are look for some adapted genic herbs to get themselves more I guess opportunity to sleep and deal with stress. – Thank you for sharing that and levers.

It's like pulling levers which which lever for you right now is the lever that's going to make a bigger difference because it is a combination of variables and it finds the levers that that that you're intuitively drawn to and that maybe you're a little less experienced with and if you resonate with God as a lever, I I do recommend the healthy gut company and their supplements are fantastic.

So thank you so much Steven for joining today and thank you everyone for tuning into another interview on the microbes and mental health stomach. I'm your host, Dr. Miles. This has been a pleasure.

Thank you Steven.