Hey, everyone. Great to be with you. Today I'm with a special guest, Steve Wright. And this is one of the most important topics we're going to cover, in my opinion.

In this you got summit. And that is the whole topic of leaky gut. Is it real? What is it? What can you do to treat it and how does it affect the rest of the body?

Because as you know in this series, really talk about the gut connection to the rest of the body. None of this focuses in on the leaky gut and of course, the microbiome as well.

But it's all tied together. So, Steve, great to be with you. Yeah. Thank you so much for having me on. I'm very excited. I know you're a thinking person because you have an engineering background in at least for me.

And I look at the body, it's got all the engineering principles in it. So if you look at it from an engineering perspective, things make sense. And then you can work with the healing systems of the body.

So it makes sense. And I know you have a story in terms of on the past. What got you into identifying what's going on, leaky gut, how to heal naturally, and all that tells me about your story, if you would.

Yeah, just I mean, a brief story. I'm in this field like many other people who are in this field. I had issues from birth, and they only got worse as I went through a lot of antibiotics and stress and weight gain and, you know, bad foods and all that thing.

And then, of course, I turned to Western medicine after some really embarrassing situations in my early 20s. And they basically told me at the time, this was like 2009.

Hey, you can have all the Metamucil, antibiotics and whole grains you want. You're going to suffer with this the rest of your life because you have a family history of IBS.

And so I thought, well, I'll just suck it up, you know, and just power through. But after another couple late nights of missing dates and things like that, I was like, there's got to be another way.

There's got to be somebody who's struggled with this and then overcome it. And if I could just find that person, I could reverse engineer what they did and try it on myself.

And so that led me on a, you know, it's almost 15 years now, I guess, West here of just digging deeper. Okay, change my diet. I got better add in some supplements.

I got even more, better do some functional medicine. I found some parasites. I found some hormone dysregulation. I found some, you know, just digging thing after thing.

My nervous system was a little out of whack. And so it's as I've gone through the the sort of cycle since then, I've been trying to educate the world.

Right. Blog posts, things like that. And so leaky gut is near and dear to my heart because I believe the first article I wrote was in 2011, and at that point in time, I believe we were one of the first articles ever on the web trying to look at doctor research and some other research from around the world saying that, hey, there's this really cool thing and really important thing called leaky gut that happens.

And it basically is the gateway to almost everything else bad that happens around the rest of the body. And that was around the same time that Harvard and a bunch of other sites had these leaky gut as a myth.

Leaky is leaky gut real. And so now fast forward, you know, is 2024. And now all those sites are now ranking at the top of Google saying, oh, leaky gut is real.

And so it's kind of fun to come full circle. Well, you make a good point because I have a book just came out, the Holistic Guide The Gut Health. And in there I site Harvard where they talk about how leaky gut is real and so forth.

And I totally know when I got into practice, 1995. Yeah, just, you know, this is a myth. This is these holistic doctors are way out there, and now it's all over the medical literature.

And of course, it was back then too. It's just, you know, unfortunately mess, you know, it works. Ten, 20 years later, people start making these things are real.

So anyways, so then yeah. So what did you find then in terms of well actually let's back up step maybe for the viewers, let's talk about what this term leaky gut means.

People hear the term but they may not really know what it means. Yeah. So I would say that the basic understanding of leaky gut that I think is now permeated from right here, which I feel like we're at the tip of new ideas and, you know, the best medicine and best alternative health we can have to Western medicine it.

Now understand that leaky gut is this idea that our our gut cells are one layer thick, and when they are chronically open, there's a free flow of all types of things, from food to toxins to bacteria to other types of microbes.

And when they flow through those gut cells, without the proper mechanism to keep them out and check them, the immune system goes bonkers. It does not like it.

It really reacts. And then you have this chain of inflammation and cytokines and things that just spread throughout the body. And then we all have a family history of something.

We all have genetic weak links of some type. You can't escape that. And so we all know now that inflammation gone unchecked typically starts to manifest in those genetic weak links.

And so if you think about the process there, essentially you have a chronically open gut lining that the body's not able to close back basically, then triggering inflammation that spreads out and ends up causing issues wherever you might have a weakness.

Yeah. So it sounds like I know we're both in agreement when you have this leaky gut you got in the small test testing, like you said, you have this one cell layer epithelial layer and it becomes damaged through diet and toxins and stress and medications and all sorts of things.

And then you can have problems right in the gut itself, like digestive problems. But like you said, this is where they get body connection comes in. Because like you said, things are absorbing through leaking through that shouldn't getting into the bloodstream, getting other parts of the body, the immune system sees it as a foreign invader.

And like you said, cytokines, inflammatory things happen and bad things happen systemically. Would you say that's how you would summarize it? Yeah, 100%.

It is a issue of the body not being able to close down the gut barrier anymore. And I think where people need to evolve their thinking is this idea that you can just seal it up one time and then go back to your regular life, and you'll never have some sort of chronic disease in the future.

You'll never have some sort of digestive issue in the future. And that is very basic level of thinking, and I want to really move the conversation forward, because our body would never be designed at such a basic level.

It's so much more interesting and complex and amazing than just this idea that we could just take one product or do one, one diet, and then the gut will be sealed, and then you will not have these inflammation cascades causing

other bodily harm.

Yes. So we of course, everyone wants to get into, you know, how you can heal it. But let's before we go to that, maybe just give us a few more details on what you see, what you've read, what you see with clients and stuff in terms of the root causes of why people get this leaky gut to begin with.

Yeah. So I would actually propose that leaky gut is not just the definition of leaky gut should be, in my opinion, this chronic, unchecked leaky ness.

But a lot of folks will say, well, that's because the rubber bands that keep your cells together, which are normally referred to as tight junctions, but there's a lot of different types of junctions in there that they basically get lax or they get broken or they don't.

They're not strong enough to keep the cells together. And then people will say, well, that's when the leaking this happens. And I would say that's the last layer.

Like if you're at that level, a lot of other things have gone wrong already inside of your gut, and we need to move the conversation to a different level and say, how did they get exposed in the first place to broccoli or, you know, probiotics or, you know, inflammatory bacteria of some type, whatever, toxin, LPs, something like that, that might actually break them or damage them or inflame them.

And to me, that conversation needs to go back a few more layers to the layer out that protects that, which would be the mucus layer. There actually should be this really thick, nice, juicy layer that sort of doesn't allow things to touch those cells.

It doesn't allow things to break those tight junctions. And then beyond that, you should have a layer of basically microbiome and chemical defense things.

These are things like Secretary IGA that a lot of people may have heard of. And these are basically just your body's chemical defenses to deal with this complex microbiome environment.

And then beyond that you actually have an oxygen layer. So you actually want a low oxygen gut. And it without a low oxygen gut you are going to be dysbiosis.

And you're going to cause extra LPs and extra toxins to essentially be allowed to live. And so I feel like it's a cascade where the body is like a castle.

It's not just going to have one single point of failure, it's going to have multiple points. And if we get all the way down to the point of our tight junctions are open, our immune system is inflamed and it can't deal with regular things like strawberries or kale or beef or whatever.

A lot of other things broke before that. A good point. Good point. So tell us more about what you see in terms of dietary things causing people all sorts of problems for gut health.

Leaky gut. Yeah. So if you're on a more westernized diet and you're eating a lot of processed food, you are going to be sure, you know, you can say there's like chemicals.

There's there's like flavoring agents and sort of toxins, seed oil and things like that that are, that are definitely bad and they're going to be hard for your body to deal with.

But you're also stripping away the fibers and the polyphenols and all these things that are actually really core to having a healthy gut. And so it's not just that a process diet.

And this is actually true for for a gluten free process diet, actually, if you're eating mostly processed gluten free or something like that, this is also happening where you're accidentally starving your gut bugs of the food that they

consume to be healthy.

And when that happens, you typically have a lower amount of short chain fatty acids, which is basically like the poop of your probiotics. And that in there is a chemical called butyric acid.

And butyric acid is the keeper of the gut. And in my opinion, at this point, everywhere you look like in the body, you're like, what does what does what causes heart disease?

What causes dimension? You see inflammation? Well, everywhere you look inside the gut and you're like, what causes low mucus or what causes microbiome biases or leaky gut?

You find butyric acid connected. And so butyrate is really important to keeping a low oxygen environment and everything else I just mentioned. But we accidentally end up starving it if we don't give our gut bugs enough of the fibers and the prebiotics and the polyphenols that they would get from a more whole foods based diet.

Yeah, no, you're absolutely right. And of course, a lot of people, especially here in California, do eat gluten free. And I do tell patients, look, we know it's very clear in the literature you're not you typically don't get enough of the good fiber when you do that.

And so you're not feeding the good bugs like you said. And then the end result is that butyrate. So people need to get other sources of fiber on those gluten free diets.

And a lot of the gluten free, most of the gluten free products are highly processed. And so that can be weakness. On the other hand, you mentioned Doctor Santo earlier, and of course he's done tons of research on how gluten allergy.

And I would argue in some cases, gluten sensitivity is a well studied in terms of causing leaky gut. What do you counsel people in terms of the weak gluten issue?

I think unfortunately, it's very real, and I don't love that answer because I'm going to be totally who I am, which is a hedonist. And gluten is delicious.

Sugar is delicious. But I know that I've had my genetics tested. I don't have the markers for celiac disease, but I've also run a lot of panels on myself.

And I've also just tested like, all right, I'll be gluten free, really strictly for like, you know, three months, and then I'll try a little gluten. And without a doubt, if I do it for a few days, my skin gets blotchy, my digestion starts to get off, my stool, quality gets off.

And so, without a doubt, I think that research essentially shows that the gliadin and the gluten inside of wheat are particularly hard to break down for us, and why that is, and why that is evolved, I think is still up for a lot of debate.

Is it the glyphosate that is sprayed on the wheat in America? Did did that glyphosate actually kill off the bugs inside of our gut that actually make a an enzyme that would break down gliadin or gluten like these are all things we will maybe find out in the next 20 years.

We don't know the answer now. So I do say that if you are dealing with a chronic condition of any type, you owe it to your body. If you're going to do supplements and you're going to go see a functional medicine or integrative medical practitioner, like be 99% gluten free if you can, it is enough of a risk that it would suck to do so much right and then be held back by this.

One thing that we do know in the literature is inflammatory to a large percentage of GI tracks, even if you can't feel it. And that's that's the hard part about gluten is Alessio research and other people's research since then essentially says that there's a number of people who feel it as a gut problem like constipation, diarrhea, bloating, celiac disease.

There's a lot of people who don't feel that, though they might be the one struggling with blood sugar regulation or skin issues or hair falling out or low energy.

And they're really focused on that one pain point, but it could actually be starting in the gut. And so I think that's where it becomes this insidious thing that it's just best to leave it out.

Yeah. Good point. We see a lot of people certainly do better. No, not everyone can do these tests and stuff. So it's like I said, a high percentage of people will notice benefit doing that.

Now what about on the American diet? A lack of getting the good microbes, bacteria and stuff? I mean, there's not I mean, the average person isn't eating a lot of cultured foods and that maybe they may they might eat yogurt. Hopefully it's not the high sugar kind.

But tell us more about that. Yeah. So actually I think what Stanford did an awesome study two years ago now where they looked at people, where they gave him a bunch of fiber, or they had them eat at least two servings of some sort of fermented food.

And they didn't they didn't tell them like a low sugar kombucha. They just said, hey, just try to get at least 2 to 3 servings of a fermented something in your diet.

And what they found is that the people who did the high fiber had nowhere near the beneficial impacts, as the people who did the eat whatever type of cultured or fermented food, you can result.

And so they saw, I think, lowered inflammation markers, other just holistic health markers. These weren't sick people. They were just trying to understand the impact of fiber versus eating more microbes.

And I think the the truth is, is we have we have created these awesome lives that we have technology to do this recording, to do this summit, we have a guy and all kinds of cool stuff that are happening, but we're getting away from playing in the dirt and being outside and all things that are actually really important for our immune system.

All when we're outside, all those smells, all those bugs, the dirt, all that dirtiness that we've eliminated are actually really important signals and molecules for our immune system and our gut to relax and be intolerance with the rest of the world.

And as we pull back, as we hand wash 24 over seven and sterilize everything, we actually strip a stimulus that our immune system is relied upon for the entire amount of time you think we've been on this earth.

And so by stripping that out, we actually kind of put ourselves in a bubble like the the Bubble Boy movie type thing. Yeah, yeah. And, and every time we try to go outside the bubble, you know, our immune system reacts.

And so why cultured foods and fermented foods are really, really important for us at this point in our Western world is that they're one of the only sources of these random, molecules and signals to our immune system and to our gut that like, hey, there's a lot more outside the bubble, and it's okay if you pull back and relax a little bit.

When we interact with pollen, when we interact with new foods, when we fly to a new part of the world, or whatever it might be. Yeah. Very good. Well, let's just touch on medications that lead to leaky briefly.

And we're going to the things you like to recommend for treatment. What kind of common medications have you seen or cause problems for leaky gut? Well, in saids have been shown now in the research and particularly people who chronically take them.

So if you're somebody who say you're a migraine person and you have a lot of migraines and you're popping extra strength ibuprofen or aspirins, things like this.

You're at a higher risk. If you're someone who plays sports or has chronic pain, and you're popping these pills on a

regular basis, we know they're injuring the gut lining and contributing to leaky gut pretty quickly.

And then let's say you're actually someone who has a chronic condition, an IBD or inflammatory condition, and your doctors prescribing a higher an actual prescription anti-inflammatory medication almost guarantee that prescription medication is going to cause gut dysfunction and leaky gut in the future.

So those and that's the worst part, right? We're they're dealing with an inflammatory condition. And then their cure for the ill is actually going to cause downstream effects later on in the next 3 to 6 months, where you get in these downward spirals and it becomes very hard to dig yourself out and wean yourself off of the pain medications to actually heal the gut and get rid of the other pain.

Right? Yeah, I've seen a lot of literature on the end sets and pain medicines. That's that's true. How about antibiotics? What do you see with that? I mean, it's definitely in mice.

There's good research now in mice that the antibiotic are like a they're like a bomb that hits women and children as well as bad guys. And that's just the truth.

All antibiotics are like this. It's not that sometimes you shouldn't choose the bomb. You definitely. If your life's on the line, you know, go with the right bomb for your situation.

But just know that you you're going to need to bring in the the Red cross for your gut, and you're going to need to bring in the humanitarian aid and rebuild the gut.

And what they're finding is that basically, remember I talked about we have oxygen, we have chemicals, we have microbiome physical and then we have the immune system.

And so microbiome is a barrier of defense that protects the gut lining. And if you bomb that that microbiome lining out you'll also take apart the mucosal lining a little bit as well.

And so now you have the opportunity to mess with those tight junctions. And that's what those gut epithelial cells and piss them off. And when that happens you have this chronic disease state that you have to try to figure out how to stop it and correct it.

And so that's where antibiotics are part of the cycle of leaky gut. And doing something like acid supplementation during antibiotics actually has been shown as probably the most promising idea that we have right now to use during any sort of antibiotic therapy to try to protect that microbiome.

Well, I know people are excited to find out how you nutritionally, holistically help people to leaky gut. So you know how you go about doing that. Some of the key things if you would.

Yeah, I do I do want to mention one of the things about God that people. Okay. Most people don't even know about this, but it's becoming a big enough thing that I really want to get a message out, which is that there's really good research that suggests if you have a traumatic brain injury or a concussion, you almost immediately have leaky gut as well.

The tight junction expressions in the brain and the gut are essentially the same. And so if you get in a car wreck or if you're playing a sport or your kid is playing a sport and they get a concussion or a traumatic brain injury, you should expect to have leaky gut for the next little while.

And so I do want to get that out there that like, look, you could be totally healthy. You could have never had any sort of of gut issue or chronic health issue.

And then someone hits you on the way to work, or you've tripped and fell in the middle of the night, hit your head, and now you could actually be expressing not only dizziness or sort of traumatic brain injury related things, but you could have leaky gut almost immediately.

And so when you're thinking about these conditions and how they're tied together, just remember what's happening in the brain is typically happening in the gut.

And what's happening in the gut is typically happening in the brain. And so that could be an issue. And please watch out for it. Yeah. Good point. Good point.

Okay. Tell us about how you help people with the natural therapies, because we both know people are helped substantially with the types of things you're going to talk about. So let's get into that.

Yeah. So we already we already talked about like the first just easiest domino which is cut out gluten cut out processed foods if you can, you know, 98% of the time, if you're able to try to eat a whole food, die with lots of fruits and vegetables, starches, things like this, that right there will help your body begin to heal, because some of those foods do cause irritation and inflammation to the gut process.

So there's the removal part, and people are kind of aware of that, I would say. But the rebuild part I think is where we're all struggling as a, I don't know, as, as a group to really figure out what's the best way to rebuild a gut, not just so that it's like not reacting to things, but like that it actually goes back into life and is resilient.

The next time in a box or taken, or the next time you hit your head or whatever it might be. And so a lot of my research, a lot of my focus for the last four years has been on this resilience thing.

Like, how do we how do we go to the next level? Because there are things that have been used for decades now in alternative medicine, things like zinc, L, l, glutamine, colostrum, these types of molecules and agents and things can totally help a gut.

And they have been proven in the research and they've been proven in clinic, but they seem to like begin to lose their effectiveness over time. And then they also tend to like the as soon as you stop them, the chance for like a re not a reinfection but a re injury basically go significantly up.

And a lot of people don't like the idea of like, do I have to take this forever? And so I've been moving on to thinking more about butyric acid and how do we like if butyrate basically increases mucus thickness because it does in the research, if butyrate makes the microbiome thicker and more diverse, which it does in the research, if beta eight lowers oxygen, it doesn't.

The research. How do we get like a ton of butyrate? Because that seems like a key that we could focus on that if we built a lifestyle around it, the chances of us being able to resist a stressful day or a stressful week or another infection go way up.

And so what my research has led me to is that you got to have those foods, the food for the butyrate producers, which are the polyphenols, the fibers from vegetables and fruits and things like that.

And then the other thing is that you got to have the right bugs to make, to turn that food into, into butyrate. And a lot of people don't have the right bugs.

And so I think there's a lot of possibility going forward for how do we rebuild those bugs. And so that's where something like taking exogenous butyrate can help rebuild those bugs.

And then once you have. Either the prebiotics that they need or you're eating the right diet for them, typically you can bring them together and it will restart that beneficial cycle there.

And over time you can wean off the supplemental butyrate. And then you can just keep taking a lot of either prebiotics or just eat a really diverse like less of vegetables, fruits type of diet.

And that's probably the most resilient you could be. And your leaky gut has way less of a chance of ever happening. Nice, nice. That's great. So people will be wondering what period of time should they take things to

notice?

Improvement obviously depends on the severity of their condition, what the condition is, what they tell us a bit more about timing, what to expect, how long to stay on things, you know, safety, toxicity, all that kind of stuff.

Yeah. So again, if you're like mildly upset about your health, like you haven't really done a lot of work on your health, like you probably don't need to be on it as long as somebody who's maybe over 50, over 60, who's been struggling with this for a decade or longer, or you're somebody who's been in their 20s and they've been, you know, sick basically their whole life, like for, for the there's a spectrum here.

And the longer you've been struggling, probably the longer you're going to need support and the shorter you've been struggling, the shorter you'll need support.

The cool thing about there's different forms of beta that you could supplement. The cool thing about tributary form is they've actually done a bunch of studies because it's kind of anti-cancer.

It basically helps the cells, especially in the colon and the large intestine. It basically helps them not build up too much DNA misrepresentation. So it helps them it helps kill off the cells that are like sort of misfolded and kind of messed up.

And it helps the expression of of the other healthy cells. And it also helps express the part of the immune system that looks for those bad cells. And so they did a bunch of research on cancer patients in the 90s for oral tripe, uterine.

And they found like a really high level of safety. They took like 42,000mg a day or early, and a few people dropped out of the study for nausea and like, disrupted blood sugar.

So in a supplement category, in a study like that, that's pretty awesome results. Like normally we don't get that kind of data unless it's a pharmaceutical.

And so the safety, the safety of that would mean like most products on the market, you'd have to chug the whole bottle and you still wouldn't get 42,000mg right now.

The cool thing is the effective dose for, say, leaky gut or rebuilding the gut is typically more like 1000 to, say, 6000mg a day. Like that's the general range.

Most people need about 1500mg of a tributary in source, to 1500 to like 2500mg. The number one mistake I see is people not using tributary. And the number one mistake I see if you use tribe urine is using less than 1500mg a day.

They are like, well, I'm taking it and the bottle says two on the back. But the back of a supplement label is actually built for the FDA. It's actually legal language. It's not health advice.

And so you need to be working with your practitioner or like really deep into this stuff to know, you know, how do you go higher and at what point do you actually create this efficacious restarting of the butyrate process?

Yeah. Very good. Well, maybe in the last part here, just tell us a bit. Maybe your summary kind of thoughts on treating leaky gut not only helps common digestive issues, but whole body health.

Maybe just give us some your thoughts on that. Yeah. So let's say you're working on a number of health conditions. Hopefully you're working with a doctor in your tracking things like HS, CRP, which is an inflammatory marker.

Maybe you're tracking like sedimentation rate or said rate. These types of gross or broad inflammatory markers, if you have leaky gut and you go through this healing process, you should see a change in these numbers downward or more towards the healthy number of the reference range.

But you also should see things like rashes or blotchy skin, or acne or eczema, rosacea, these sort of manifestations that are very hard to figure out.

And they often show up on our skin. They might show up in our hair, our eyes, our nails. It could be in our joints, these types of things that like, are just hard to track.

There's not necessarily specific marker that you could test for them. As your inflammation load comes down, as your gut heals, you will be driving your own internal inflammation.

Less the inflammation comes down and then these like aches and pains that you have just accepted are part of your life. They should begin to go away and only happen a few times a year.

That's that will be my goal for everybody that your gut is. Your gut is healthy enough that you can eat most of the foods you want to eat. You have a good ball movement every day as a quality bowel movement.

You're not afraid of food and then whatever it is you're dealing with, let's say you're an asthma person. There's links between leaky gut and low butyrate and asthma.

If you're a skin person, I've mentioned skin a lot. There's also links to osteoporosis and low butyrate and leaky gut. There's links to dementia and Alzheimer's and low butyrate and leaky gut, like almost anywhere we look.

Type two diabetes, type one diabetes. There's links everywhere. Heart disease authors build up things like that. So it's not that if you heal leaky gut or if you supplement with tributaries, that those other conditions will just magically go away because that's not how the body works.

But what it is saying is that one of the drivers of those conditions, one of the inflammation drivers of those conditions, will go away. And as it goes away, it makes whatever else you're doing.

If you're exercising or you're taking a supplement for that other area, or you're dealing with a toxicity issue, a mold toxicity, whatever else you're dealing with will easier and better.

Once you just basically stop stepping on the brake all day long, every day. Wow. That's great. Well, Steve, thank you so much for all the great information.

Leaky gut bacteria. How to heal leaky gut. How connects to the body. This is really good information, and I know the viewers can also get more information at your website.

Healthy.com. Healthy.com. Correct? Yes. Excellent. So thanks for making all that information available. And again thank you so much for your time Steve.

Yeah. Thank you.