

Michael Roesslein:

I don't know what's going on. Can you hear me?

Steve Wright:

Yeah, I can hear you.

Michael Roesslein:

Awesome. Hey dude.

Steve Wright:

How's it going, man? You got a haircut.

Michael Roesslein:

It's just wet actually.

Steve Wright:

Oh.

Michael Roesslein:

Just got out of the sauna so it looks a little less unruly. And you are not traveling now.

Steve Wright:

I leave in the morning.

Michael Roesslein:

Oh, all right. Caught you at home for a minute. So just let me see. All right. People coming in. They start these on zoom right when we get here. We'll let people trickle in for a second and then we can get started. I think it's been-

Steve Wright:

How's the sound on your end for me?

Michael Roesslein:

Sounds good. Do I sound okay?

Steve Wright:

Yep. Crystal clear.

Michael Roesslein:

All right. This is my fourth headset of the last three months. I have a knack at technology going haywire and sideways. It's a special skill. It's a special skill that I have developed over time. We did an awesome webinar on digestive enzymes a few months ago. We added HoloZyme to the shop. People have loved it. We've got a lot of good feedback. It's done pretty well. We have a couple more subjects to talk with

Steve about. So we're doing a couple more webinars, this being the second one. For those who don't know you or weren't on the last webinar, Steve Wright is the founder of Healthy Gut who makes some incredible gut and digestive related products.

He was also one of the co-founders and creators of SCD lifestyle, website, and brand that was pretty huge in the gut healing world. When I first got into this and somebody who I've known as an expert on these topics and subjects around digestion and gut health and symptoms and root causes and anything related to the GI world for 10... I don't know. I think I saw... Were you on one of Sean Croxton's things back in the day?

Steve Wright:

Yeah, I was.

Michael Roesslein:

Yeah, like a million years ago.

Steve Wright:

Yes.

Michael Roesslein:

That's a name that only those who have been around a while would probably know at this point, but I think I caught you guys on one of his things when I was first learning that there's information on the internet in general. So thanks for coming back and for doing another discussion with us. Somebody just said, "Oh my God, I am that old."

Steve Wright:

Yeah. That was a-

Michael Roesslein:

Shout out to Sean's summits.

Steve Wright:

In internet years, that was like a few decades ago.

Michael Roesslein:

Yeah. It feels like I was a child then. Yeah. So other people saying, "Yeah, I was around for Sean. I used to listen to Sean." I don't know how we got this, but Sean's underground... Was it Underground Wellness? His podcast, like the first place I heard about so much different things and then he started doing the events that were great. So yeah. Shout out if Sean is somehow obscurely watching this webinar.

Last time we talked about digestive enzymes, and that's something I kind of knew quite a bit about before we had chatted and I went searching for digestive enzymes for our retail shop because we did a survey and that was the number one thing that people wanted were digestive enzymes. So I found the best ones, the HoloZyme that you guys make, in my opinion, are the best ones. And that's why we did that one. I kind of knew what I was talking about coming into that webinar.

This one's a little bit of a different story, so you're going to have to carry me a little bit more in this one. Because we're talking about something that's probably not quite as well known or as popular as digestive enzymes, but those who have been into the gut health and gut healing scene, the word butyrate probably has come up in conversations in things you've read quite a bit. So we're going to talk about butyrate and what it does and different forms of it, I think probably and ways to deliver it and what kind of results can be seen. Is that kind of accurate butchering of what we're going to talk about?

Steve Wright:

Yeah, yeah, yeah. We're going to talk about what I think is probably the most important new supplement for gut healing that I've seen in the last 11 years. I think it'll be... In two years, everybody who's here right now is early. So in two years from now, I think, butyrate is going to be common knowledge amongst most gut healing protocols across the functional and integrative medicine space. The general public will probably start hearing about it then. Yeah. It's just impressive in its ability to drive results in like a large number of users. I mean, HoloZyme, I love that formula, I'm very proud of it, and it works for a lot of people, but Tributyrin-X and what we're talking about today has gotten more reviews and more love than anything that I've seen.

Michael Roesslein:

It's really just a matter of building awareness at this point around this where it just doesn't have as much momentum behind it right now. Like it's a newer thing. So it's about building awareness, getting it in people's hands, letting them try it sort of thing. I have a bunch of questions because I'm kind of curious to know how this even came about, but I think that one will come later. Go ahead.

Steve Wright:

It looks like some people are going to come back. But I think the easiest way to start this conversation off is at a meta level. Everybody says, "Eat your vegetables." Everyone says, "Take prebiotics." There's various diets out there that are high in multicolored vegetables. They say, "Eat the colors." You know, all of these things, one way to look at them is they are food and fuel for your microbiome and what your microbiome gives off, one of the most important things, is berate. So the, the poop, if you will, of the microbiome from all that vegetable matter and probiotics is butyrate. And then from there we can go into how 95% of colon cells' energy usage comes from butyrate. The other 5% is absorbed and goes systemic. Basically everywhere you look and every condition from autoimmune conditions, neurologic conditions, asthma. So lungs, bones, the outside of the gut. So brains, lung, bones, like all over the place, liver health, you find low butyrate equals worse outcomes.

Michael Roesslein:

I was typing in the chat to let them know Q and A and I muted myself. So I wasn't typing over you. Use the Q and A button if you got questions real quick. So you mentioned butyrate is an energy source. So the bugs eat the vegetables, eat the produce, the bugs poop out many things. One of which is butyrate and it's a short chain fatty acid. Correct?

Steve Wright:

Correct.

Michael Roesslein:

And then there are cells in the colon, like the lining of the large intestine, gobble that stuff up and use it as fuel.

Steve Wright:

Yep. That's the quote unquote primary usage of butyrate. Short chain fatty acids, let's define those. Most people are aware of MCT oil. That's a medium chain triglyceride. So that's just a fatty acid that has a medium amount as defined by researchers of fat molecules bound together. Short chain fatty acids are the same thing, but smaller molecules. So there's at least six of them. Acetate, propionate and butyrate are the most well known, the most abundant, the most studied and butyrate just happens to be the one that has the limelight and the majority of the most positive outcomes. The other ones can in higher dosages skew towards more negative health outcomes sometimes.

Michael Roesslein:

Okay. That makes sense. It's kind of like simple carbs and complex carbs. Like it's just a smaller molecule. It's easier to utilize. It requires less breaking down, less digestion. So the cells in the colon can just gobble it up. And to me, knowing what I know about the equivalence of the health of the large intestine and the ability to absorb food and to do all the things that the intestinal lining does, probably it having a source of fuel handy is beneficial for the just overall function of the cells of the gut lining. Right? That's kind of the...

Steve Wright:

I mean, yeah, that's one of like 20 bullet points.

Michael Roesslein:

Okay. Hit us with some more.

Steve Wright:

Okay. So one of the coolest things... So let's just stay on its gross functions, if you will, its macro functions. When colon cells and potentially even lower small intestinal, like right at the juncture there as you cross over from the lower small intestine to the upper large intestine, that's where your microbiome really is. That's the majority of it. It's not near your anus or anything. It's up higher in the large intestines. So in that area, when the colon cells absorb the butyrate to do their metabolic functioning, they need oxygen. So that metabolic process is oxygen heavy. So what it does is it sucks oxygen out of the large intestine, and what that does is create the right environment for a really healthy microbiome and a really healthy large intestine.

One of the things you and I are always probably looking at and researching is like, how do you recover a microbiome that's just totally messed up? Or what sort of inputs can we change to change our diversity or make a dysbiotic microbiome go away? Well, the biggest thing that know you learn in a lot of different schools of thought including naturopathics, their school of thought is heavy on this, but you can just learn this in your seventh grade bio dome class. Like if you change the environment, that's the fastest way to change the species inside of nature.

So in a healthy colon, you're pulling oxygen of that area, which makes it low oxygen and lower pH, which means anaerobic bacteria, anaerobic meaning bacteria that don't like oxygen, they tend to thrive. And anaerobic bacteria are pretty much what we want thriving in our colon, in our microbiome. So I think for years, we've been really trying to figure out what probiotics, what prebiotics, what diets modify these

things. I think the most exciting thing for me at the macro level is that we now have a class of supplements that can go in there and begin that process, right? It can begin to hopefully lower the pH, lower the oxygen content, which then allows all the other cool things we can do with all the other products to really rebuild that diversity. I mean, it has also been studied and butyrate supplementation does increase the diversity of the microbiome. That's one of the other things, but that I think is one of the coolest things and the recovery of the microbiome, that's pretty much one of the golden tickets, even antiaging.

Michael Roesslein:

And that's kind of like a works both ways thing. Because what I understand too is that a healthy microbiome's going to produce more butyrate. But then the spiral kind of goes the other way where the microbiome gets trashed, makes less butyrate, something that's needed isn't there, so it gets more trashed. And then it's kind of like pausing that downward spiral and giving it artificially giving it what it would be making if it was in a healthier state.

Steve Wright:

Exactly. And guess what foods are the most like butyrate potentials? They're usually the FODMAPS and other-

Michael Roesslein:

The ones that give people trouble to digest.

Steve Wright:

Right, right. The ones that are often eliminated or aren't included in most people's diets on a regular basis. So yeah, you get in this downward spiral where you remove foods because they cause you pain that further causes dysbiosis. If you lose those butyrate specific species, then it doesn't matter if you provide it with the right food, you're not going to make the butyrate. So that's where something like a Tributyrin can come in and hopefully stop the slide and begin to rebuild it, such that the goal being that you eat food and you produce enough butyrate and a really healthy microbiome just from that food.

Michael Roesslein:

Okay. Yeah. Because I've seen certain prebiotics will advertise clinically proven to raise butyrate levels a little bit or certain probiotics will say like, "This is a butyrate producing species," or something like that. But then direct butyrate supplementation is something that I never thought was a thing before. I don't know if there's new... And we can get more into more bullets if there's more things you want to talk about. I'm kind of just going all over the place here. Originally, butyrate to me, this was probably about five, 10 years ago was that it was really difficult to supplement because it didn't necessarily make it to where it needed to go in the form that it needed to be in, I think. One of those problems.

Steve Wright:

Yeah. And we can hit more of the bullet points on the way down the digestive track as we talk about that.

Michael Roesslein:

Okay.

Steve Wright:

Yeah. The first generation of supplements for humans was butyric acid bonded with a salt. So sodium butyrate, calcium butyrate, magnesium butyrate. That's the easiest way from a pharmacy perspective to stabilize the molecule and get it into a human. Now the problem with those class of butyric acid supplements is that they're rapidly absorbed because salts cross the GI track in a gradient. So you can't slow it down. You have to protect it from the stomach acid. So that was another big thing. They had to develop acid resistant capsules and gastric resistant capsules. Then once we got it through the stomach, then the sodium butyrate, which has been heavily studied in humans and the results are very beneficial for a number of things from Crohn's to UC, to diarrhea, to constipation. There's been sodium butyrate studies on all those in humans with usually over 50% success rates, sometimes 60 and 70% success rates in these studies, which is pretty remarkable for gut health studies.

The issue there is you may be consuming more sodium than you want, and that sodium may build up in the gut and cause some issues. So since the eighties, scientists and researchers have been trying to figure out how to use Tributyrin, and Tributyrin, it's three butyric acid molecules bound by a glycerol backbone, glycerine backbone. So it's a triglyceride basically. They've done, for instance, oral tolerance studies and safety studies on cancer patients because one of the benefit of high butyrate is it basically helps create healthy cells in the colon and helps kill unhealthy cells. It basically is part of the processing of which cells should be destroyed and which cells are good to go. So the differentiation of those cells. So they gave oral Tributyrin to cancer patients in up to 42,000 milligrams a day. And all they saw was side effects around like GI upset and I think one of the type two diabetics had some blood sugar issues. 42,000-

Michael Roesslein:

42,000 milligrams?

Steve Wright:

Yeah.

Michael Roesslein:

Did they use a shovel to do that?

Steve Wright:

I don't know. And back then, it's probably-

Michael Roesslein:

I'm trying to even mentally picture what 42,000 milligrams looks like. And it would probably be about this much.

Steve Wright:

Basically there's 45,000 milligrams in a bottle of Tributyrin-X.

Michael Roesslein:

Okay. So it's a whole bottle per day. Because what you just said about it, it helps the beneficial cells proliferate and it helps kill the cells that are not supposed to be there. It sounds like it would be pretty

spot on for something like colon cancer. So that was kind of the gist of the approach. That was why they were pounding colon cancer patients with high levels.

Steve Wright:

Yeah. It was all types of cancers. All types of [crosstalk 00:16:27].

Michael Roesslein:

All types of cancers. Okay.

Steve Wright:

Yeah. Cancers, breast and prostate and all kinds of things. Because they were true trying to figure out, could they get enough of it into the systemic circulation to benefit the rest of the cancer? Now they didn't really find much outcome there and the research kind of died down, and that's because the gut cells love to gobble it all up. So one of the cool things about sodium butyrate, as well as these Tributyrin compounds is what they can do for leaky gut. That's on the bullet point list. I think everybody at this point's heard leaky gut, they've heard tight junctions. They're the rubber bands that keep your one cell layer thick gut together basically. Butyrate has been shown in research to improve tight junction function and expression. So it basically helps repair that part.

But what we've learned about leaky gut in the last 10 years has been a lot and leaky gut's not just a tight junction issue. It's actually at least a four... The most recent paper I saw is they're labeling it a four layer issue. So layer one at the cell layer is the tight junction, loss of those. Layer two is your mucus lining. If you lose the density and the thickness of the mucus lining, then you're exposing all these toxic compounds and undigested food particles to that really, really delicate skin layer. So you got to have a thick mucus layer. On top of that, the microbiome and all the bugs like to basically stick to and be in that mucus layer. So good microbiome diversity-

... mucus layer. Could microbiome diversity also helps protect against leaky gut? And then, also, there's all these new compounds and peptides that are defense in molecules. So, alpha defenses, beta defenses, most people have heard of secretory IGA. There's also one called IAP. And these are all these weird, cool peptides that your gut cells basically release to go neutralize bad stuff in our gut. And so, the best part about Tributyrin is that it's been shown in all different studies to basically upregulate all those things. It upregulates MUC2 gene, and mucus production. So, healing those mucus pathways. It increases microbiome diversity, and then it upregulates peptide defensins in the gut. I've tried a lot of leaky gut stuff, and I think I might have had the first course in the world on leaky gut, back in the day. And we used to use all these powders.

PART 1 OF 4 ENDS [00:18:04]

Michael Roesslein:

It was the first one I ever saw or did or read or watched. So, yeah.

Steve Wright:

We used to use all these powders and these hype for complex protocols, trying to figure out how to solve leaky gut. And I think finally, we're starting to realize why a lot of those different powders and potions didn't get the job done. And it's because you're not hitting all four of those layers to a leaky gut. You can, you can have great tight junctions, but if you don't have a mucus layer, you're just going to

keep exposing really, really sensitive one layer, thick cells to a bunch of toxins. And if you don't have a microbiome that's in a symbiotic relationship, that's also going to cause issues. So, I think, from a leaky gut healing perspective, I'm like just blown away at what, what tributyrin can do.

Michael Roesslein:

Interesting. I think I did some of your protocols about nine years ago, so, that's a little simpler. Okay. I took a bunch of notes there. That's what I was doing. I was trying to keep track of some of the bullets of the effects, it's all four angles, or all four aspects of leaky gut, the tight junctions, the mucosal layer, the microbiome dysfunction, and the compounds and peptides defensin molecules, secretory IGA. A lot of people in our Facebook group are often ... a post I've seen a lot is, "I have low SIgA, what do I do to raise that? Or how do I fix that?" And butyrate has come up in those conversations, but it's always been around like eat resistant starch, because resistant starch can increase butyrate production.

And I don't know if anybody out there that has pretty significant digestive problems has ever gone down the eat-resistant-starch route, but a lot of people then find their belly to be the size of a basketball. So, that's not always a simple answer. Like you mentioned, there's FODMAPS there's resistant starch, there's these kinds of foods that do spike butyrate, if they can get to where they need to go without feeding a bunch of other bugs and turning into a beach ball.

Steve Wright:

Yeah, and I've looked into that. Because I tried the resistant starch programs back in the day as well. And I gave them to some consulting clients, and reviews were like 50/50, or maybe a little worse than that. And like you said, people would have extreme reactions. Some people would be better so fast, and other people, it was like one of the worst experiments they ever did in their life. And what I see now in the research is that basically there's a class of bacteria that has to basically break the resistant starch down and then it passes those molecules off to the butyrate producers to produce the butyrate. So, if you lose the resistant starch to degraders in your microbiome, or the butyrate producers, then resistant starch is probably just going to cause gas and upset GI. And so, I think that's why there's such a confounding factor when it comes to resistant starch.

Michael Roesslein:

That makes sense. And that was my experience with it too. I had a few people that were like, "Oh my God, I feel amazing." And then other ones were like, "Why did you do this to me?" And I felt terrible when I personally ate them. It was not a good experiment for me. I have some-

Steve Wright:

Do you want to circle back to sodium butyrate and tributyrin, and the two compounds, and the difference between those two?

Michael Roesslein:

Sure. Yeah, yeah, yeah. Sodium butyrate, back to that, was the one that has been well researched, well studied, but too much sodium can cause problems in the gut. So, then it was kind of a catch 22. Right?

Steve Wright:

Right. Right. Most studies are about four grams a day of sodium butyrate, and they haven't really pushed it higher than that. And there's been three or four studies now, all in animals and only one in



humans ... Well, there was the one study on tributyrin doing super high doses that you're not going to use those, in a human. You're not going to use 42,000 milligrams a day of tributyrin. But in various animal studies from pigs to mice, they have shown ... and also cell culture lines of human cells, they've shown that tributyrin either has a much higher effect than sodium butyrate, or it has less toxic effects. So, tributyrin at this point, it's just a superior compound, pharmacokinetically. And so, part of the reason is that 3-butyric acid on the triglyceride backbone, this basically makes it time released.

Like, the chemical in and of itself, is time released. When, like with our product, we have a true enteric capsule, which we could talk about later. Basically it means like the difference between an iPhone 10 and iPhone 5, in the water. Our ours gets through the stomach acid, for sure. Then when it opens up that tributyrin is going to float down the GI tract pretty far, because it doesn't get absorbed and it doesn't break up until it's lipase. And the lipase begins to break it up. It becomes this much more slowly release compound, and therefore it's able to coat much deeper down the intestinal tract. And we hope it gets to the large intestine, but all the studies so far have shown that it doesn't necessarily need to deliver the payload there to actually make all these changes. That's that's how we know sodium butyrate's absorbed in the upper one third of the small intestine, and yet it's still able to help Crohn's, and colitis, and IBS D, and IBS C, and all these things. So, we know that, you don't necessarily have to get there.

Michael Roesslein:

And it's observed a lot faster, earlier.

Steve Wright:

Right. Right. Totally.

Michael Roesslein:

Okay. So, it's more of the tributyrin will make it to the part of the GI tract that would have even more of an impact than the sodium butyrate makes it to.

Steve Wright:

Right.

Michael Roesslein:

But it's the same effect once it is absorbed, pretty much. It's just, it's absorbed more in a better location.

Steve Wright:

Yeah. Yea-

Michael Roesslein:

Minus the sodium.

Steve Wright:

Right, right. It's less sodium. We have a lot better toxicology studies. You get a much better coating down the GI track. So, you're covering more surface area. All of those things.

Michael Roesslein:

So, you're saying 42,000 milligrams a day of sodium butyrate would be ill advised

Steve Wright:

Extremely ill advised. I don't think [crosstalk 00:25:04].

Michael Roesslein:

I think my blood pressure just went to 300. Yeah. Okay, cool. That makes total sense. And the studies, you said there's a lot of studies on benefits of sodium butyrate. You're thinking if they reproduce the studies with tributyrin, the results would probably be even more impressive.

Steve Wright:

Yes. A hundred percent.

Michael Roesslein:

Okay. Making butyrate ... Let me go back. I have histamine. So, histamine intolerance and histamine issues and food reaction type things. Histamine is something that's really tricky, that a lot of people have problems with, that a lot of people in our group specifically have issues with. And histamine is often something tricky to deal with. So, where does tributyrin come in, and butyrate in general, but tributyrin especially, come in with histamine issues?

Steve Wright:

Yeah, so-

Michael Roesslein:

Go ahead.

Steve Wright:

Basically there's a few things. We need to protect the mast cells with the mucus layer. We need to have some mucus layer fixing. And then, also, in the research, butyrate has been able to basically soothe the mast cells. It sort of slows or, even in some cases, inhibits histamine release. And so that's pretty powerful right there. And what I've seen in our customer group is, people who are already on like DIO enzyme, which breaks down histamine, they're on a quercetin, they're on maybe even an antihistamine or something, to try to really block the histamine release. And maybe they're stuck on a very antihistamine diet, which can be one of the most restrictive diets in the world, honestly. They recover really quickly on tributyrin. So, they're able to double their foods sometimes in 60 days, their various issues that they have seem to go away pretty rapidly when they find their ideal dose.

And so, again, I've never found anything that's quite this amazing for mast cell issues and histamine issues, again, for those people where the regular, the first layer of interventions isn't getting the job done. And then what do you do? It's like when you're in that microbiome dysbiosis cycle, where you have to keep taking foods out, taking foods out, taking foods out. How do you ever get back to a resilient gut that can eat all this stuff? And that's where, coming in with a tributyrin supplement. And there are other tributyrin supplements out there. Pure Encapsulations makes the other one that I would recommend. It's a liquid form, instead of a gel cap, like ours. But any of those, just trying any of those, is going to be probably a game changer for somebody who can't eat strawberries, can't eat fish, can't drink red wine, all these things.

Michael Roesslein:

Gotcha. And if there's histamine people or mast cell folks out there, I know that you've probably tried like a bazillion things. So, usually, when I meet them, they're on their last straw, they've tried all these things. They're down to eating like six foods. They're frustrated, they hate food, they hate eating, they hate supplements. They hate all of it. And totally understandably so. And so, that's really impressive that you're seeing results with people with histamine intolerance.

Steve Wright:

Yeah. I would say our crowd at this point-

Michael Roesslein:

You can't even take supplements a lot of the time, because to the thing that you're taking, that's supposed to cause you to react less. So, that's pretty impressive.

Steve Wright:

Yeah, We have a big time partnership with some mast cell people out there who use the products clinically in their offices. And so we have quite a big following of histamine intolerant folks. And so, they are very cautious, like you said, they want to open the capsule and go slowly. You cannot do that with butyrates, they smell like terrible vomit. You'll never want to do it again. But they're able to just start with one gel cap every three days or so, and slowly work up on dosages. And the customer feedback is amazing. I mean, it's not going to work for everybody, but the success rate ... Again, I'm an engineer, I'm always looking for 80% or better success rate, which is really high, in the supplement world anyways. And this meets that bar =, and it's pretty cool.

Michael Roesslein:

That's impressive. That's pretty much the trickiest group of people that I've encountered thus far, to be able to find something that can help them, that they can actually ingest. So-

Steve Wright:

Yeah. And probably more of it is also due to the immune functions of butyrate. We talked about, or I mentioned briefly that, for instance, there's studies on asthma and butyrate, and how basically, asthmatics have lowered butyrate producers. And I think it was a supplemental sodium butyrate study helped some asthma people. And what butyrate also does, as soon as it's inside the cells and across into the portal vein, is it helps stimulate T helper cells and T reg cells. And these two cell types are so, so important for immune systems that are out of whack [crosstalk 00:30:33].

Michael Roesslein:

They're the ones that tell the other cells what to do, and, "Attack this, or don't attack this." And we've done some pretty extensive webinars on gut immune cell and T reg cells when they're out of whack, are the ones where everything goes sideways.

Steve Wright:

Yeah. And you can begin to regulate those with tributyrin or sodium butyrate, for that matter.

Michael Roesslein:

Cool. That has autoimmune related benefits. So, that's probably where you see the benefits of the colitis and the Crohn's studies and thing, is regulating that immune response in the gut that gets really out of whack.

Steve Wright:

Yeah, yep.

Michael Roesslein:

So, you covered histamine intolerance, food sensitivities, mast cell, leaky gut autoimmune ... Something you sent over when I was asking for some information was in quotes, it said, "Magnesium of the gut." I don't know what that means. So-

Steve Wright:

Well, it-

Michael Roesslein:

Can you clarify that a little bit? Because magnesium's pretty ... I mean, probably half the people listening to this take magnesium, because it's known as the number one mineral supplement everybody's deficient in, that you should take it, there's as a zillion uses. I'm an advocate. I take two forms of magnesium. So, how is this the magnesium of the gut

Steve Wright:

It's because of what you just said because, well, number one, this is a really new class of product, and it's a new topic. And people are having a hard time really placing it in their knowledge base. But people understand that magnesium's used everywhere. And the same is true for butyrate. It's used everywhere. For instance, it helps stimulate parathyroid hormone, which is important for creating bone. So, there's a bunch of studies on mice where they show taking butyric acid, either slows bone loss, or increases bone formation. There's studies on the sleep. We have a whole class of people, I don't know if it's 10 or 15% of our customers, who think that this product is their final answer to deep sleep. For instance, myself, I've, I've had Oura Rings since Oura Ring launched.

I had sleep trackers prior to that. And I've always had pretty terrible deep sleep numbers, high REM, but not very good deep sleep. And there's a, it is a mouse study on giving tributyrin and seeing a huge increase in deep sleep numbers. And that's what I found on my Oura Ring. I'm finally back above an hour on deep sleep. And we have this whole group of people in the community who don't have GI issues, who just take a capsule before bed for the sleep benefits that they get. So, it has obvious effects in the brain. That whole segment of neurodegeneration research and all that stuff is underway right now. There's no real ... anything on sodium butyrate, or tributyrin yet for the type of brain things. But if we assume that the blood-brain barrier is like the gut-brain barrier, which everybody says it is, and we see the benefit on sleep, I think it's probably only a matter of time before we realize just how important these tributyrins can be for the brain as well.

Michael Roesslein:

So, not just in the gut, absorbed into systemically and provide the same sort of benefits with other barriers, basically. Yeah.

Steve Wright:

Yeah, yeah. And that's in the lungs as well, for asthma, allergies, that kind of thing, the brain barrier.

Michael Roesslein:

Wow.

Steve Wright:

So, all those systems.

Michael Roesslein:

We had Dr. [Krausian 00:33:46] come out and talk about blood-brain barrier stuff. I got really smart in about an hour and a half. But-

Steve Wright:

Oh, yeah. He's a genius.

Michael Roesslein:

Geez, man. Sometimes I got to really put on the pay-attention shoes to be able to keep up so I don't make a fool in myself during those interviews. But yeah, and he talked about the similarities though. He talked about the similarities between the blood-brain barrier and the gut barrier, and that he agreed that there just hasn't been as much study, and it's more difficult to study. You're not going to endoscopy somebody's head. There's no cameras getting stuck in between the skull and the brain. It's much easier to study and to assess, but that, what he said from the molecular structure of them, or the cellular structure, whatever terminology he used, it can be deduced that they function pretty similarly.

So that's interesting. I would never think that something butyrate related would impact my sleep in a positive way. I'm running out of things to ask about, because you've covered pretty much everything that people struggle with. It's pretty remarkable that one molecule can do this much stuff. And I'm excited to hopefully see ... I know people are always like, I can tell right now there's somebody out there like, "Well, why haven't they just done these studies with the tributyrin? Why is it only with sodium butyrate?" Or, "Why is it this?" And working so closely with [Curan 00:17:07] at Microbiome Labs, I learned what it costs to run a large clinical trial study. And it's millions of dollars, even if you only want to have about 40 people participating in it. So, until a drug company wants to try to patent tributyrin, it's probably not likely you're going to see large scale clinical studies. But why did they run them on sodium butyrate? Or do you know anything about how that came about?

Steve Wright:

Yeah, because it's a easier compound to make and it's stable. And so, it's cheaper and easier to give to people.

Michael Roesslein:

Ah.

Steve Wright:

And then, it's only been in the last four years ... in which, number one Pure Encapsulations worked with some scientists to figure out how to wrap tributyrin in a liposome, and this kept it protected from the air, it kept it protected from the stomach acid, and it helped reduce the smell. The other thing is, you got to make these things able for people to take it smells te-

Michael Roesslein:

Yeah.

Steve Wright:

So, the other thing, is you got to make these things able for people to take-

Michael Roesslein:

Yeah.

Steve Wright:

It smell terrible. And so then, for instance, our enteric capsule that we have it's patent pending, this thing only developed three years ago.

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Michael Roesslein:

Got you.

Steve Wright:

And so, inside of our capsule is 99.9% pure tributyrin. It's the purest on the planet right now. And again, you had to make a enteric-resistant, gel cap that was able to lock in enough of the oxygen, or make the permeability such that, it could basically, be that pure and not need stabilizers and all other preservatives, all that stuff. So, the biggest issue has been the science and getting tributyrin the molecule, able to be ingested by humans. And so, sodium butyrate was just figured out long ago, it's easier, it's much more shelf stable, all those things.

Michael Roesslein:

Got you. So, if the tributyrin touches the air, it's toast?

Steve Wright:

Yeah, it's going to start breaking down pretty rapidly-

Michael Roesslein:

And smell awesome.

Steve Wright:

Yeah, it's going to smell the worst smell-

Michael Roesslein:

So, do not cut these capsules in half and huff them?

Steve Wright:

No, no. And most of- [crosstalk 00:37:11].

Michael Roesslein:

Okay, does it smell like rotten eggs, type smell?

Steve Wright:

Yeah, that and weird vomit-

Michael Roesslein:

Oh.

Steve Wright:

The worst vomit, wild vomit plus rotten eggs.

Michael Roesslein:

Okay, great. It's been a while for me. So, I'm going to pretend like, I don't know what that smells like. I actually got food poisoning on June and I vomited for the first time since I was 22 years old. Everything sucks more when you're an adult. When you're older, falling down hurts more, doing yoga hurts more, everything hurts more, being sick is a million times worse. So, all right. I think, you answered more questions than I had. I guess, one would be, we talked about it in the digestive enzymes webinar, why you wanted to formulate a digestive enzyme.

It's basically, because you found the ones that you were taking and spending tons of money on, weren't working all the time. And then, you researched why that was, and you found that none of them really did what it was that needed to make them work more often, which was the co-factors and the delivery and the formula. And so, you made it and it's a big jump from digestive enzymes to something like this. I guess not, if you're just a research nerd about things that heal the gut, or was it just, because did that come first, then this? Or, did you develop them all together?

Steve Wright:

No, no, it's been six to 12 month projects. So, HCL Guard came first, and then HoloZyme, and then Tributyrin-X-

Michael Roesslein:

Okay.

Steve Wright:

And yeah, I had been buying sodium butyrate capsules from all different manufacturers, on and off, for years. Because, I would get really excited about the research and I would see it and I'd be like, "Oh, I'm going to buy some of that and try it." And I'd just never really got results for myself. And so, I was frustrated, because the research seemed so promising and I wanted the results. And so, that led me down this crazy research rabbit hole and led me over to Spain, to a scientist over there, who's been

specializing in tributyrin for 30 years. So, tributyrin has been used in animals for well over, three, or four decades now. And it just so happened that he spent his whole life working on butyrates and tributyrin specifically. And so, he's the one who's really, I guess basically, has the proprietary technology to get it to 99.9% purity. He's the one who has gone through all the capsule technologies and found the PXR cap, to be the one to do it. And so, we were just able to partner together and bring it over here to the States.

Michael Roesslein:

Awesome. You find the most interesting scientists hidden somewhere in scientist dungeons and pull them out. I love when Steve gets frustrated with something, or can't figure something out, because then he just researches the hell out of it, until he comes up with a solution. So, we need to throw some more stumping questions at your products that don't work and you can go figure out how to fix them.

Steve Wright:

Yeah, send them over.

Michael Roesslein:

But yeah, butyrate's no secret. The fact of butyrate and all that it does in the body, and the functions of it and the benefits of it and the everything. I mean, that's been something I've been hearing for a decade, but yeah. And I'm sure that I did not discover it and that this was well known for quite a long time. It's a staple, this is not a debatable hot topic, or new thing. It's butyrate is important for these 72 million reasons in the gut. It's always just been a, "Can we deliver this in a way that makes it to where it needs to go? And is absorbed, like it needs to be absorbed, in a safe and effective way that doesn't cost a million dollars?"

Steve Wright:

Yeah.

Michael Roesslein:

That was the challenge. And so, now the last few years, that challenge has been figured out, to an extent. And I don't think I really have a ton of questions, more myself. There's some audience questions, if you want to jump into those?

Steve Wright:

Yeah, for sure man.

Michael Roesslein:

Hold on, let me post. And the reason we're doing these webinars with these products, is for those who are either new to our audience, or didn't catch the last nine memos, is we sent out some surveys over the last six months, like, "Hey, what do you guys want? Do you want more blog content? Do you want more master classes? Do you want more of this? What do you guys want?" And what most people wanted, was us to expand our retail shop. They wanted more high quality products, they get confused, they get frustrated, they buy a bunch of crap that doesn't work. They spend tons of money and they've gotten good results with a lot of the products that we've recommended over the last, five years we worked.



We've got your Holozyme, we've worked with Microbiome Labs quite a bit with the MegaSpore and a lot their other gut products. We've got a couple from these guys, Quicksilver, I like their Hydrogen and a couple other things. And people wanted that. They asked, the overwhelming number one response, was that they wanted us to expand our shop, which for me, is the thing that's the most work.

And here's why, is because I won't promote, or sell garbage products. And honestly, the reason that we hadn't expanded the shop the last few years, is because if we can't find something that's better than anything else, that they would find on the market, or that we can either afford to put in there, or the margins workout, or something. It isn't easy for me to find products that I really like, that I think are awesome, that fit into the shop, that we would stamp our name on. So, I was like, "Oh great. I'm going to go get to research, a whole bunch of supplement products." And with Steve, we got to knock out three of them with one phone call. So, I'm excited about that. And that's why we're doing these webinars.

Because, if we recommend a product and we're going to retail a product, we want there to be a really high level of education available on our site. With these webinars, we'll probably create some blog posts and some other information, because we want people to be able to make the best decision possible for them. We want people to be able to know, "Okay, this might be right for me. This might not be right for me. This is how to use this. This is the research behind this." We're not just going to slap 30 new products in the shop and be like, "Here you go, have at it. Good luck figuring it out." So, we try to go to the source of where these things come from and where they can get them. And that's why we're here, that's why we're doing this.

So, I just put a link in there to the new product. It's Steve's product, Tributyrin-X, it's in our shop. There's a one-time-use coupon code there for you to try it out, if you want to use that. His company's called Healthy Gut. So, that's why we're doing these webinars on these products. And the recording will be available, we'll have this posted with information about the products. We want people to make informed decisions and not just take my word for it. So, that said, that disclaimer thrown out, I have... And yeah, yes, there's a coupon code, check the chat. I just put the link in the coupon, in the chat, everybody should be able to see that. Gastritis, we have three questions from people about gastritis. I don't think I mentioned that gastritis is a bit further up the chain and this stuff doesn't get released in the stomach due to the capsule and everything. So, maybe indirectly related to gastritis, but not a direct-

Steve Wright:

Yeah, it would be a indirect systemic... So, if your gastro is related to some auto-immune related issues, or immune imbalances, it'd be a highly indirect. I'm not saying it couldn't upregulate the mucus genes, that it might also help protect that gastritis. But yeah, our capsule's a fully enteric capsule. So, it's like an iPhone 10. You throw an iPhone 10 in the water, it's just fine. If you leave it there all day, it might break. The other ones are acid-resistant capsules. If you throw those in the acid, they start to break down right away, it's like an iPhone five. You better get that thing out of the water right away. So, the product is not going to release in the stomach at all.

Michael Roesslein:

Okay. Can you use Butyrate, or tributyrin during a water fast? Or, does it break the fast? That's really a matter of opinion of you. There's no hard rules to things like that. It's not like a high caloric count, or anything. It's not like you're going to be eating calories. So-

Steve Wright:

No, there's zero calories.

Michael Roesslein:

I do water fasting. I take supplements when I water fast and I don't consider that breaking my fast. So-

Steve Wright:

I take supplements as well when I water fast.

Michael Roesslein:

Yeah. And I feel a lot less like hell when I do.

Steve Wright:

Yeah.

Michael Roesslein:

So, I just took amino acids in the last one, which actually are proteins, which technically, is breaking a fast. But, it was awesome. It made three days go by in two hours, it seemed, it was super breezy. So, pro tip. How does tributyrin fit in with L-glutamine? I think that's- [crosstalk 00:45:49]. No, go ahead.

Steve Wright:

Yeah. I mean, L-glutamine's great, and I'm a big fan. It's just L-glutamine is a preferential fuel source for the small intestine cells. And that's all you get out of it. And so, you're not going to get all the rest of the layers of leaky gut that we've talked about here today. You don't get any of those extra benefits. So, if you have predominantly small intestinal related issues, if you have some burns, or healing to do from surgery, L-glutamine's great. Just don't underdose it, most people underdose it. But, they're not really the same class of compound. And you could take them together, if you really wanted to try to maximize everything.

Michael Roesslein:

So, one more small intestine, one more large intestine in systemic?

Steve Wright:

Yup.

Michael Roesslein:

Okay. A lot of people have issues with glutamine too, that comes up in our group a lot. Of excitotoxicity, they don't feel good when they take it. Which, we can get into all the reasons why that happens. But, I don't think that's an issue here. Probably, silly question, but if it kills old cells could this cause Herx reactions?

Steve Wright:

I haven't seen it from that. And I'm not claiming that this treats cancer, or even kills cancerous cells. I don't know that, that's the exact mechanism. Again, it's going to be an indirect route of influencing the

genetics and epigenetics of the various types of cells, and the immune system to hopefully, find those cells. Again, not treating anything here, just-

Michael Roesslein:

Yeah.

Steve Wright:

Supplemental health. So, the Herxes that people do have, are typically, the most sensitive people. We're talking MCA-S and multiple chemical sensitivity folks that literally, are eating less than 10 foods, can't take magnesium, can't take curcumin, even the normal things that help people. Sometimes, you will react to those. The other thing, is highly constipated people. So, people stuck on laxatives, or high doses of magnesium oxide, or citrate, or something like that, to use the bathroom.

It's counterintuitive, because the research shows that using Butyrate for IBS-C helps and it shows that constipated people have less butyrate. But, one of the things that tributyrin does and butyrate do, is they slow the motility, they regulate the cell's motility in the gut. And so, you got to go really slow and really low. And we find that ecosystem restoration happens in these people where, if they take one capsule, every three days, they can pretty much use their magnesiums and their vitamin Cs, or their laxatives, or whatever, to stay regular. And then, slowly at week four, week six, week eight, they start to go every other their day, every day. And then, usually when they get to everyday, something happens in their reliance on these osmotic laxatives, or true laxatives starts to go way down.

And so, my theory is that's when you're starting to actually get that oxygen-pH balance back, and you're actually starting to get the ecosystem restoring. But, that is the only "side effect", is too much of Tributyrin-X for your body, will constipate you. And I wanted to figure that out, because I mean, we haven't talked about it here, but I thoroughly test this stuff on myself and my friends who will play along. And so, I wanted to figure out and sure enough, when I got to like six capsules a day for Tributyrin-X, I was super stopped-up for two days. And I had to use a bunch of magnesium, to get everything going again.

And right now, I'm usually at two, or three a day, depending on my stress levels. Which is where the majority of our customers end up using it, is between two and four a day. However, everything is on a bell curve and 34% of people are going to way less, or way more. And so, if you are somebody like some of our customers, who've never had a formed bowel movement in their whole life. And they've failed every drug out there known to slow diarrhea. They're using higher doses. They're using nine, or 10 caps a day, 12 caps a day, but they're having their first formed bowel movements through their whole life.

Michael Roesslein:

That's an exciting thing.

Steve Wright:

It is.

Michael Roesslein:

We've had a few of those folks in our groups too, with a couple of things. I think, when we first had the prebiotic, we had a couple people be like, "I pooped poop." And you could see all the people who have been through the same thing, because they were all the ones commenting on the post and congratulating them. And then, the people who have been fortunate enough to not have that problem,

we're just like, "Why is this so exciting?" But, yeah, and congratulations to them. Let's hit up a couple more. I don't digest cellulose. Is there a strategy of using enzymes to break down resistance starch to feed butyrate producers? Yeah, the Holozyme. It can handle my popcorn. So, I think I've brought that up on the webinar.

Steve Wright:

Yeah.

Michael Roesslein:

That was my test, yours was red wine and something.

Steve Wright:

Tortilla chips.

Michael Roesslein:

Tortilla chips. Mine's popcorn. So, now we can have popcorn and movie night without me having a beachball belly, because of the there's cellulase-

Steve Wright:

Yeah.

Michael Roesslein:

In the Holozyme, right? Yeah, those enzymes are in our shop as well. If you follow that link in the chat, Steve formulated them and they work much better than any digestive enzymes that I've used. And I've tried a lot of different digestive enzymes.

Steve Wright:

Yeah. And I can't say that, that's going to immediately allow you to repopulate those resistance starch degraders. I actually have not figured that out yet. I don't actually know what builds those people back up.

Michael Roesslein:

Okay. [crosstalk 00:51:21].

Steve Wright:

But-

Michael Roesslein:

But, it would help break down the cellulose?

Steve Wright:

Right, totally. Yeah.

Michael Roesslein:

Yeah.

Steve Wright:

Yeah, that's a definite conclusion.

Michael Roesslein:

Patient develops frequent bowel movements, four to six a day in March, several days after receiving the COVID vaccine. She is taking three different probiotics a day and is a little better. Would something like tributyrin possibly be helpful there? I mean, this borders on medical advice we can't give, so I don't know if you can speak in a generality. You're saying if you much it can back you up?

Steve Wright:

Yeah. What I can say, is that it's the best thing I've ever seen for regulating loose stools and diarrhea.

Michael Roesslein:

Okay.

Steve Wright:

And so, travelers diarrhea is a lot of the studies. IBS-D is a lot of the studies. And so, again, prebiotics are great, enzymes and HCL is how I used to try to control it in high dose curcumin, but nothing works like Tributyrin-X for slowing motility down.

Michael Roesslein:

Cool. Is high blood histamine level the same issue as histamine intolerance, or issues with food? No, I don't believe so. In other words, will tributyrin help lower high blood histamine levels? I don't know.

Steve Wright:

Yeah, I don't know the answer to that question. It could be, again, if your mass cells all over your body are excessively producing histamines, this can regulate the expression of histamines from the mass cells. So, it's possible, but I actually don't have anybody who's had it before and after. I'd love to see that, before and after, if you try it and it works.

Michael Roesslein:

Cool, is this contraindicated for SIBO?

Steve Wright:

No.

Michael Roesslein:

Safe to take with SIBO? I don't see any reason why it would be, but I'm just-

Steve Wright:

No, in fact, it typically helps SIBO. Especially, anything that's bloating or pain-related SIBO. Because, the other thing, is it's super anti-inflammatory to the gut, and the studies around butyrate are reducing of

pain. So, more butyrate equals less pain, more butyrate usually, equals less bloating. And so, as far as SIBO prevention, or knocking the SIBO out, once and for all, I think it's a worthy test to add to a full protocol. It's not going to do it on its own.

Michael Roesslein:

Cool. Is there any effect on the migrating motor complex?

Steve Wright:

I mean, it could have some effect. But, I haven't seen anything in the research studies about it. I don't know that anyone's ever tried to measure it yet. So, I can't say that it's one way, or the other on that.

I can't say that it's one way or the other on that.

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Michael Roesslein:

Okay. What does the term post-biotic mean?

Steve Wright:

So post-

Michael Roesslein:

I think we used that in our email. I think we got that from your team and they just called me on not bringing it up in the webinar.

Steve Wright:

That's awesome. You have some of the most dedicated followers in the world. So post-biotic, it was coined, I don't know, five or 10 years ago, is basically a way to categorize any metabolite or anything that comes out of the quote unquote probiotics or the microbiome as sort of a catchall phrase for all that, the short chain fatty acids, some other compounds that come out. And so again, this is a weird topic and people have a hard time with putting it in a box. And so a lot of people are calling it a post-biotic in order to give people a box. So you have a prebiotic, you have a probiotic, you have a post-biotic. Pretty soon everybody will be taken para-probiotics. So there's all these new boxes that researchers are creating so that we can basically make sense of it.

Michael Roesslein:

Gotcha. There's a couple questions related to autoimmune, autoimmune eczema. We kind of mentioned there's a huge gut, skin, eczema GI track correlation. Do you know Jen Fugo?

Steve Wright:

Oh yeah.

Michael Roesslein:

Oh yeah. That's right. You coached her, right?

Steve Wright:

Yep.

Michael Roesslein:

She's got a killer podcast, by the way. Anybody out there that has skin issues, her podcast, I think it's called Skinterrupt, solid branding. I think it's called that or Healthy Skin Podcast or her website, Skinterrupt. anyway, killer podcast on skin issues for those out there asking the eczema questions. But she did a presentation for our microbiome master class that was gut microbiome and skin issues, and it's literally the same thing.

Steve Wright:

Usually.

Michael Roesslein:

And there's very little difference there. Could you just real quickly mention, because we talked about the immune regulation and Treg cells? Could you just touch that one more time to answer these?

Steve Wright:

Yeah, sure. And we could come back to the motility question too. I saw that pop up. So in the research studies, especially there's a ton of mouse on this. There's other cell culture line studies on this, but basically butyrate increases T helper cells and Treg cells. And Treg cells are one of, if not the most important sort of referee of your immune system. It's kind of like allocating resources to TH1 or TH2 or even all the little subsets of the immune system, which are so complex I can never remember all of them. You have to have a Dr. Kasian brain to really get that down.

Michael Roesslein:

I glaze over on a lot of those too.

Steve Wright:

We really want a lot of cells to be very high in a regulated immune system that's ready to take on a bacteria or a virus or an autoimmune condition. And T helper cells are one of those. I don't know what else to say other than you want more T helper cells. T helper cells balance any sort of out of balance you might have. So if you're in some sort of immune condition, like a leaky gut condition plus some sort of immune trigger, you can be stunting all your resources towards one direction of the immune system, or one inflammatory pathway, or one cytokine pathway. T helper cells are basically the referees that come in and sort say like, "No, we've made too many of those types of immune cells or are making too much of those cytokines. Let's reign that in and let's get more balanced here."

Michael Roesslein:

Gotcha. If you want to touch this motility, there's a couple people saying that a healthy skin show podcast in our website is Skinterrupt. See, I got it right. And we have Jen Fugo fans in our audience. Jen's awesome. Hi, Jen. Cibo equals constipation. I was thinking that too. If it slows motility, then with Cibo, you would imagine that would be a bad thing. And I probably gave a wrong answer in the chat. So do you want to answer that?

Steve Wright:

Yeah. So it does regulate motility. So too fast motility and too slow motility. So it's a bit like an adaptogen, but for those people who are constipated, you have to go much slower because at least my theory is at this point, which hasn't been totally proven out, is that the constipated people seem to have even less butyrate and seem to be more butyrate sensitive than anyone else out there. Even mass cell people are like this is easier for them, but the constipated folks seem to be very, very sensitive to butyrate supplementation until they get to a level of reconstruction on the gut, at which point things begin to regulate again. So it's sort of a counterintuitive thing. And I wouldn't have figured it out had it not been for several thousand people in our customer group.

We have health coaches on our team. I'm in there all the time and trying to find people's ideal dosages. And then another one of our biggest partners is All About Cibo. I would say the majority of our buyers have had Cibo or histamine issues. So it's not like this is the first rodeo. And that being said, this could be wrong for you. It could be wrong for anybody on this call. And so you just have to try it. We only see about 3% of people asking for refunds. So it's a really small percentage. And again, like I said, we're very up in people's faces.

We want to be in touch with our customers. We want to figure out what dosage. Are they taking one a day, two a day, five a day? And we want to help them dial that in because one too many pills can equal constipated. And one too few can equal you're just watching the webinar again, listening to this, going, "These guys are screwing me over. It's not working for all the things they said." And all you needed was one more pill a day. So it is very sensitive in that regard.

Michael Roesslein:

I can attest to that. We had somebody who experienced I think some bloating or something, some negative thing they didn't like when they took the HoloZyme. And we forwarded their email to your team and you had three people respond to it. Somebody jumped on the phone with them. There was pretty extensive back and forth. And I've actually never seen that before. So I wanted to actually give you kudos for that. Usually if we would email a supplement company we work with, they would just be like, "Cool. Tell them this" And it would be the same stuff off their FAQs or something. And there's no personalization, there's no interaction, the customer doesn't get to talk to anybody. And your team responded really quick and was really hands on helping them find a solution for them. So-

Steve Wright:

Well, thanks, man. We pride ourselves on that because all of us were just like probably the people on this call.

Michael Roesslein:

I've literally never seen that before. So that's awesome. Any contraindications? There's a couple questions related to contraindications or dangers or cautions or anything.

Steve Wright:

Yeah. Again, there's this really rare thing called alpha-gal, which basically means you react to anything with animal product in it. You can't take this because it has a little bit of pectin that comes from non-GMO beef extract. And so it's needed for the patent pending capsule. So it's just that, and then the constipation thing. So those are the only sort of contraindications. And if you're on the constipated side or if you're a practitioner working with constipated people, you just have to either re-listen to this or hit us up Support Our Healthy Gut or something for more direction, but I've laid it out here, which is that go



really slow once every three days and plan on a 12 week sort of introduction. You're only going to need one model and you'll slowly build up tolerance to it. And then there's some sort of switchover that seems to happen for most people in that 12 to 16 week period for the constipated folks where their gut environment just changes and they're able to, like I said, use less magnesium oxides, less vitamin Cs, less laxatives, whatever they're using.

Michael Roesslein:

No issues with immunosuppressive drugs or steroids that you know of?

Steve Wright:

Yeah. I'm not a doctor. So-

Michael Roesslein:

And we can't say that for sure, but I would ask a practitioner.

Steve Wright:

I'm aware of anything, but talk to somebody.

Michael Roesslein:

What's the name again of the condition where you can't take animal products?

Steve Wright:

I think it's called alpha-gal.

Michael Roesslein:

Is that the thing that comes from a tick?

Steve Wright:

I don't know much about it. I just know that it's really rare and the one group of people who can not know they have it seems to be the highly reactive mass cell activation syndrome folks.

Michael Roesslein:

Gotcha. And that would make sense because there's animal derived ingredients in tons of things that they probably wouldn't know about and wouldn't link it together. Just real quick again, on optimal dosing versus what's quote suggested dosing. Just in a nutshell, helping people hone that, is there a, a strategy?

Steve Wright:

Yeah. You just go up one per day until you kind of start to slow down. Most people don't get constipated. You actually start to feel a little sluggish, almost like the food isn't quite moving through you. And so wherever you find that point, it's one less than that. So it's kind of like an HCL challenge, but way faster and way less scary. But the range is usually two to four. That's the majority of people, unless you're crazy constipated where you have a lot of loose stool issues, and that could be secondary to any number of medical conditions.

Michael Roesslein:

Interesting. Okay. And then the last one, I'm already taking Berberine, will Tributyrin interfere or contribute with overall gut health? To me, those are completely different things where Berberine generally is antimicrobial and modulates blood sugar to some degree. I don't think there'd be any interaction whatsoever. This isn't alive. So Berberine won't kill it.

Steve Wright:

I'm not aware of how they would interact, if they would.

Michael Roesslein:

All right. And I think that's it. I put a link to the product in the chat. Everybody's going to get a recording. We're actually going to have Steve back in a couple weeks. He did mention a third product that they've developed. Actually was the first product. We're doing it in backwards order, but the HCL guard. So in a couple weeks, we're going to do another conversation about stomach acid. And that really completes the picture with the enzymes, the stomach acid and the butyrate at the different stages of the digestive process. And I'm just really excited. Because we already got a pretty strong stable of the microbiome lab stuff, and that's more probiotic, prebiotic like immune cells. There's some SBIs in there, immunoglobulins, stuff like that. We were debating do we want to double down and create the most awesome collection of gut products in one place, or do we want to diversify right away and then come back to gut products?

We decided to go the gut products route. And so between these three things and the stuff that those guys produce and a couple other things that we have in the shop, it is a pretty loaded spot for gut healing and gut products. And I kind of want to get you and Keran on the same thing to chat about this would kick in here, this would kick in here, this would compliment this here, this would work like this here because I think we could put together a mega, super, ultra gut bundle of some kind that could make some pretty impactful things happen for people pretty quickly. And plus, I would just enjoy getting out of the way and listening to that conversation.

Steve Wright:

Yeah, totally. They actually really compliment each other. They have the three pack bundle, the mega pre-pro and mucosal plus R3. It sort of gives you 360 coverage of whether you're talking about microbiome effects or feeding your body the prebiotics you need to make the butyrate. We're coming in with the stomach acid and the HoloZyme, making sure you can actually break down the food you're eating and then the butyrate to basically hopefully-

Michael Roesslein:

That pretty much nails everything. So now I just got to figure out how to do that in some other areas too. So maybe I'll be hitting you up and seeing if you're doing any more research or if you've got any other supplements you haven't been able to find that work, and you've deployed. I'm convinced Steve has a little army of minions who research for him because there's no way one person actually does all that research, but maybe you do because that webinar we do... I don't know when that was. Was that two years ago now when you talked about out your, was it the Maverick?

Steve Wright:

Yeah, maverick healing.

Michael Roesslein:

Healing? Go back in our archive and look for that in the blog. Steve researched a bazillion things I'd never heard of. Researched them, tried them, came armed with studies and anecdotal evidence and disclaimers about don't try this because I said it, and don't tell me where you got it. It was pretty fun. It was pretty fun stuff. I believe Russia was involved.

Steve Wright:

There's quite a few compounds that come out of Russia that are pretty cool. Send me any ideas, either people in the community here or that you want, but I don't know, man. I've been doing this since I found creatine monohydrate at 13 and I was getting bullied and I wanted to get bigger. And so it helped me get bigger and lift more weights. It's kind of my MO now is, I don't know, tell me what you want to look like. Acai berry, that's going to fix everything. I'm like, "All right. Hell, I'll buy bottles of your acai, and oh no, that didn't work. Okay, great." So I just have a long list plus two decades worth of sure, sell me your miracle.

Michael Roesslein:

Acai is not going to fix everything?

Steve Wright:

Yeah. Yeah.

Michael Roesslein:

It tastes delicious though.

Steve Wright:

It does.

Michael Roesslein:

Those bowls are good. Cool, man. Well, thanks for the time. Thanks for sharing everything. Thanks for all the research that you do. Again, props to you for having such a responsive team that gives a shit about the people who buy the products and about helping them find the right way to use them in the right dose and everything like that. It means a lot to us to partner with companies that actually give a damn about what they're doing and about the people that they're servicing and that they've been there. Because we didn't really get into your story in this one quite as much as we did the last time, but Steve's so gungho about digestive products because he's dealt with pretty much every digestive symptom imaginable for, I think, your pretty much whole life, right?

Steve Wright:

Yeah.

Michael Roesslein:

It started when you were pretty young?

Steve Wright:

Yes. It was a birth defect.

Michael Roesslein:

And it's caused a lot of awful experiences for you. And so he's been there. He gets it. He's tried all the things. This dude's probably tried more stuff than most people even know exists. So thanks for being the Guinea pig and the adventurer explorer type that goes out ahead of everybody else and for generously sharing that research and that information that takes a lot of time and money and energy to put together. I know when I have to research one thing, it's like, oh gosh, here goes four days of my time. So I know when I see how much research you do what really goes into that. And reading scientific journal articles is not light, easy casual reading either. So thanks for taking one for the team. Thanks for coming and sharing all this.

Thank you everybody for bringing awesome questions for a new subject. We had a whole bunch of questions and really good questions. And I see a lot of familiar names there. I thank all of you too. And we'll send the recording out in a few days, or two days probably. I'm not sure. And then everybody will check that out. And I'll see you again, I think a couple Mondays from now, I believe.

Steve Wright:

Yeah, something like that. I don't know.

Michael Roesslein:

Where are you off to tomorrow?

Steve Wright:

We are temporarily relocating to Scottsdale.

Michael Roesslein:

Ah, cool. All righty. Well safe travels and we'll talk to you soon.

Steve Wright:

Thank you. All right. Thanks everyone.

PART 4 OF 4 ENDS [01:10:27]