

Michael Roeslein: everybody, thank you for being here. I believe this is the first live thing we've done since the summit. So there's a lot of new folks here who probably haven't been on one of our webinars before. I'm Michael, the founder at RHT, and I was the host of Beyond Functional Medicine. This is Steve Wright. He right now is the founder and formulator at the Healthy Gut Company. He also created SCD Lifestyle, which was like the platform for gut health and healing when I first got into this industry, and I learned a ton of stuff over there.

And then there's been several iterations of Steve in between then and now, because he's always up to new, cool, interesting things that usually involve him doing a lot of research and trying a lot of things on himself and then telling people how it works. Did I get that right?

Steve Wright: Yeah, that about encompasses. Yeah.

Michael Roeslein: And so, yeah, Steve's a voracious researcher. He's probably read more studies than anybody that I know. And a lot of that wasn't just for kicks. It was because Steve has had a lot of his own digestive issues and anxiety and other unwanted symptoms that he's gotten to troubleshoot over the years.

And so that's where the desire and the drive to really do tons of research and create right now is creating products that really, really work for people. And I like Steve's line, Healthy Gut. I think it's the best digestive support line that there is out there. And we're really happy that you come on and talk to us about these things. So thanks for being here.

Steve Wright: Yeah, thanks for having Michael. And yeah, this histamine thing is really gaining a lot of traction. And of course, it is the springtime in most of North America right now. And so it's the perfect time to be chatting about this.

Michael Roeslein: Yeah. And histamine, I took an anti-histamine not that long ago and noticed that I was way more calm. And it wasn't just the sedative effect. And then I learned about the connection between histamine and anxiety, which we'll probably talk about in a minute. But I was like, huh, maybe I do need to take a peek at this. Or maybe I do have trouble breaking down histamines because I don't have a lot of the stereotypical symptoms which we'll talk about. So it was an interesting, I read an article and it linked to a discovery I had the day before and I was like, huh, okay, gotta get my hands on some of that stuff. So I guess first, just in case there's any people here that are kind of new to some of this, we should say what a histamine is. What is histamine? I guess it would be the place to start and then we'll go into challenges presented or problems that are encountered and what to do about them.

Steve Wright: Yeah. So there are definitely people out there that are more histamine experts than me. They've literally been doing this for 10 or 15 years. I've been doing more gut and anxiety, cancer style stuff. But in general, histamines are what are called a bioactive amine, which is just, you're getting these really crazy definitions now that science is getting better and better tools. But basically thinking of it like an active molecule, kind of like a hormone. And the reason why I say it's kind of like a hormone is because it does a lot of the same things that hormones do and it acts in a similar way that hormones do.

So for instance, most people are aware that you don't want too much estrogen or too little estrogen. In fact, both conditions will cause psychosis. They can cause both conditions can cause all types of PCOS or other types of issues there. Same thing is true with cortisol. A lot of people who are actively ill for many, many years or have been in like health crisis for many years, they don't even, they couldn't even make high cortisol if they wanted to. They actually have low cortisol and the symptoms of both high and low are very overlapping and feel very the same. And the same thing is true with histamine.

So histamine is made from your mass cells when they're stimulated to make it and then it travels all over the place. And sometimes it's like really important. So we want the right amount. We don't want too high or too low because histamine is one of the basic signaling molecules to make stomach acid. And if you've heard any number of my talks over the last 15 years, I'm a huge proponent in that most people have low stomach acid. And that's part of why you have chronic inflammation, you have chronic digestive issues, you have all kinds of chronic issues related to the fact your stomach just isn't making enough acid. So if we make histamine the enemy, which is very common in the mass cell activation crowd and the histamine intolerant crowd, that's I think a really improper way to look at the situation because if you were to just like delete it all, get rid of all the histamine, you would then have low stomach acid, then you would then have other issues around blood vessels, potentially even things in your brain that might not work as well because it is a signaling molecule in the right amount we needed there.

And it's also, technically it's a defense mechanism. So when that histamine is released and released in a large amount, part of what happens are these symptoms, right? And some of those symptoms are like watery eyes and your nasal passages swell up and you have a runny nose. Well, if you had a bug or an allergen or something in your eye, you would want to make tears.

You'd want to make mucus to try to drain it out. And so in a way it's a defense mechanism. It is part of the immune system.

And of course, if it goes unchecked, if there's too much that's made on a regular basis, that is inflammatory and it causes a cascade of problems that are like so hard to track. They're so, they

overlap with like everything you could find them like you mentioned in the brain. There's tons of links to like too much histamine and ADHD, too much histamine and anxiety. But there's also links to pain disorders like fibromyalgia. There's also just your normal histamine related complaints that you might hear such as red skin, racing heart, nasal eye related issues, congestion, that type of thing.

Michael Roeslein: That's interesting. Yeah, there's a lot of overlap with other, I can get really cloudy as to what's causing what, but I like that you mentioned that it's not, histamine is not bad. And that it's the equation, what did you use the also cortisol? And like when my wife was really sick with multiple autoimmune conditions, like her cortisol was tanked and like getting the cortisol up was like a primary goal of the protocols and the things we were doing. And you say cortisol up and a lot of health conscious people would be like, no, cortisol is the devil, you're going to get sick if you have cortisol.

And it's the same thing. Like the body doesn't make stuff that is bad. Like it's not going to make stuff that is inherently bad.

It's when it gets out of balance and there's too much or you mentioned that it's a defense. So I, I am made by mass cells. So the mass cell activation syndrome is too much mass cell activation, too much histamines. And when people talk about cell danger response and other things in the body, there's like when the body's freaked out or thinks it's in danger or stressed or whatever, it fires off these defenses. So it's kind of like a, what's that kid's story?

Boy who cried wolf and that's not, you don't want that. But then when you actually have something going on, you want these molecules, you want them to work, you want these systems to function. So we're not saying that histamine is bad and that the goal is to get rid of histamine and not make any histamine. I actually didn't know it was a signaling molecule for stomach acid.

So that's interesting. So I wonder then side question, the low histamine diet, which we can talk about in a minute, but I would guess then since most people already have kind of low stomach acid, if they then go on the low histamine diet, they probably could even further exacerbate that situation.

Steve Wright: But yeah, I wouldn't, I wouldn't spend too much going down that rabbit hole. Um, yeah, I mean, because it smells a lot of smell like your, your body, a lot of the pathway of making stomach acid and sort of part of the histamine release is a lot related to, to smelling and things like that. And so, um, yeah, I would, yeah, the smelling of food, I wouldn't, the low histamine diet has issues we can talk about.

And I'm, I mean, I think it's a tool in your toolbox and it has, we can go deeper in that, but I wouldn't chase the low stomach acid histamine rabbit hole too far.

Michael Roesslein: So you mentioned some of the symptoms. Um, people, I think a great histamine with like the red eyes or the itchy or the scratchy or the stuffy nose or, um, scratchy, like little bumps on the skin, like, uh, but then there's others that, when I was doing my homework for this came up like, uh, headaches and dizziness and brain fog and fatigue, mostly after meals, often after, after meals. And I think that that's, that's like a common, a really common thing for a lot of people now that they just think like, oh, you're sleepy or you get stuffy after meals.

That's just what happens when you eat or you get brain foggy or, you know, after lunch, you go back to work and it's like days and that, that doesn't involve scratchy skin and red eyes and watery eyes and drippy nose. And so you also mentioned that there's connections to like brain function when you said low histamine. So like, can you just speak a little bit to like that wide range of symptoms of excess histamine? Yeah.

Steve Wright: So, so in general, I would say that the majority, if not 99.9% of all the research that's been done to date is on the linkage between too much histamine, uh, in the body and then the symptom or the disease state. And so there's, I'm not even aware of a paper that looks at like, like a super low histamine state and some sort of disease state.

So I don't know that that exists. I'm just saying that histamine exists for a reason. It's used in many body processes. Like you said, Michael, the, the body was designed with a lot of wisdom.

If we make it internally, there's a purpose for it. It's just when it gets out of balance. And so in general, histamine out of balance is high.

I would characterize, like I said, 98, 99% of the conditions. And then those are linked to all different places on your body. Uh, you, like you said, we've mentioned a number of brain related things. Uh, these include, uh, headaches and migraines. In fact, there's, there's a lot of research on migraines and headaches and too much histamine. And then, uh, you know, we can talk about, uh, interventions for too much histamine and the reduction in migraines and the reduction in headaches. There's, uh, data on ADHD, which is, you know, more of like a brain functionality and the, the reduction in those symptoms when you, when you sort of, um, begin to lower histamine, uh, there are, uh, like we talked about in the vascular system. So like heart, heart racing, blood pressure related issues with too much histamine. So you have your brain, you have your circuitry system, you have the skin. So that's when you get the redness, the flushing, uh, eczema is highly related with histamine. Uh, then you have your, you have your eyes, you have your sort of, um, I guess you might call it your lymph, uh, but you know, basically all the, all the mucousy areas, I don't think there's an actual name for all the mucousy areas, but, um, makeup where it's, there's, uh, great.

Michael Roeslein: So, so generalized all of those areas. You can see is the new technical terminology. Right.

Steve Wright: Yep. That's a, that's a scientific one there. But then there's, there's other like stuff like fibromyalgia, you know, there's, there's decent research linking too much histamine and the ability to reduce histamine to improved fibromyalgia pain scores. And so then you, then you're talking pain and that's nervous system because pain is very complex. Uh, you know, like that's a whole rabbit hole, but you know, there's immune components too of fibromyalgia. There's pain components, there's a nervous system component, all these just think about someone who's sneezing, who's having a, uh, uh, an allergy attack, like a traditional allergy attack, like any sort of, uh, swelling, any sort of like airway related issues, like asthma is, is partially a histamine issue, just partially. Um, and so anything related to what you would commonly see on a movie or a TV show or in your own family with someone who is, uh, struggling in the springtime or whenever allergy season is for you.

Michael Roeslein: Interesting. I didn't know it was so wide ranging in the ADHD. Uh, I am a world champion of this. So, um, that piques my interest. Did my mic, my mic's good, right? You can hear me? Yeah.

Okay. If somebody moves in this building, the cord from my mic comes out. Like if anything touches my desk or touches anything or like somebody breathes strangely in the other room, the cord comes out. So if I go silent, just give me some, some waves. It's, it's really fun.

Actually it makes, makes recording things really easy. So, uh, interesting with the, the fibro pain, the ADHD, it's, it's, that covers almost every major body system. And there's a lot of reasons for this, but I'm guessing that along with the rest of the cacophony, there's a big word of chronic disease things like why does everybody react to mold now? Why are more people reactive to this thing?

Why are more people seeing these symptoms? Why? I'm guessing a lot of the why's overlap is to, Yeah. So I mean, is this more prevalent now? Could be more awareness, but also could be all these environmental factors, the stress levels, right? Like the way we're living everything.

Steve Wright: Yeah. Yeah. Definitely. I mean, I think the body was not built to like have a, a issue with trees pollen or grass pollen or like, if you're like me and you've had like that quick test down your back to like the 92 different grasses or whatever, or if you have like a pretty intense cat or dog allergy that you didn't have your entire life. And I do want to separate those things. Like this talk is not about anaphylactic shock that's related to the allergic system, which histamine plays a huge role in those things can be kind of prewired at birth. Although there's a lot of debate now with the peanut thing

around childhood development and but we're not talking today. Nothing I'm going to talk about for interventions can treat the anaphylactic stuff. Like if you have anaphylaxis, you know, you should be traveling around with your EpiPen and plenty of Benadryl.

And so we're going to leave that part of the discussion for a true medical situation, which that is. It's these other situations and why, yeah, why now all these food symptoms, like why are we struggling with all the food? Why is mold suddenly an issue? Mold's been around longer than we have mold is everywhere mold is never going away. Allergens are everywhere. They're never going away.

You cannot. I mean, I think that's my biggest, my biggest issue with the whole field of histamine intolerance and mass activation is you cannot filter away your house air, your car air, you can't walk around in a bubble yet. Like someday I'm sure there'll be, you know, metaphysical bubbles, you can just walk around in and never be exposed to an allergen. We just start a new business. I'm not going to be in that business because I'm in the business of helping people get resiliency to the world because the world's not changing. There's no Edd. Sorry. Yeah, no worries. And so I think the question to ask is a few things. One is if the allergens have already have always been around, if the potential reasons to create histamine have always been around, why is the equation so unbalanced?

Right? So you have, you have the equation of making histamine, but you also have the equation of breaking histamine down and getting rid of it. And so a lot of people are focused on this first part of how do we make less histamine or how do we remove the histamine producing agents? And I feel like not enough people are talking about number one, the mass cells and how do we, how do we sort of relax them? How do we give them like a weighted blanket for their anxiety or their stimulation? So they produce less histamine in response to our world.

But then two, how do we actually reduce the, the, the histamine that's in circulation and get better at that? Because I don't feel like I can control the nature world. I don't feel like I can control when I'm going to come in contact with mold or not mold, EMS or not EMS. And so I, I don't love that part of the process because I think it's sort of like a fool's errand. It can be very helpful.

Like don't get me wrong. We have a lot of people who are customers in our community that they need to be in a very controlled environment. They need to have a very controlled low histamine diet. And that phase of just getting out of pain and not having crazy intense symptoms is a very important phase. But then as soon as that happens, I want people to be thinking about, okay, cool, don't stop there. Don't even pause there. Start focusing on these, these mass cells and the, the breakdown of histamine.

Michael Roesslein: That makes sense. Like control what you can control. And for people who are in a cute stage, like when, when Mira was in tons of pain, like we had to do stuff, like we had to take a lot

more action. We had to control her environment a lot more. We had to control the food a lot more. We had to like getting out of pain, getting out of the emergency flare up situation with a lot of these chronic diseases, definitely. But the goal is never to have to live like that forever in order to maintain some semblance of health.

And pretty much everyone that we ever have come on talks about this to some degree that like, yes, the diets are fine. Yes, this is fine. Yes, this therapy is fine.

Yes, this thing is fine. But like, once you start rebuilding your health, you shouldn't need to do all that stuff. And so I like the idea of being able to, you know, you can kind of control what's external, but a lot less. The quote of give your mass cells a weighted blanket is going on a t-shirt at some point in my life.

That's, that's quality. And then, but controlling the other side of the equation is something we can do more of is controlling the or aiding or up regulating the the clearance. So the body overproduces these things. Why are we not clearing it? And do we know why we're we're having trouble clearing it? I know we're going to talk about the DAO enzyme, but is there more to the equation than than that? Like, why is it so imbalanced? Why are people having such a hard time clearing histamines?

Steve Wright: Well, yeah, the first part is that they're making a lot of people who are chasing a lot of chronic health conditions, a lot of people who are like failing to re-add foods, they're failing to sort of get out of this chronic health condition. Like, they are most likely not only making too much histamine in response to the same amount of allergen that somebody else would who doesn't have those issues. In other words, they have mass cells that are hypervigilant.

If it gets too bad, then you get into what's called mass cell activation syndrome. But there's it's not like a black and white. That's not like a black and white thing, like autism is not black and white.

It's a spectrum. And so your your first step is is can we get the mass cells to stop being so hypervigilant? And then the second step is, yeah, how do we improve clearance of histamines, which is mostly the diamine oxidase enzyme. And it's a brushboarder enzyme that's that's mostly made in the gut.

It's made in the villi area. And of course, you know, we we've heard if you haven't heard some of my talks on enzymes, you know that essentially inflammation inside the small intestine breaks down the cells and the the structure that make your brushboarder enzymes. And then then you start to get all types of brushboarder enzyme related conditions. So you have carbohydrate intolerances, you have, you know, and those include things like lactase and other sort of blood sugar related intolerances, you get, you know, histamine related intolerances, because DAO is a brushboarder enzyme.

And so there's, you know, there's just a number of things that start to play in there. And a lot of what's happening in mass activation syndrome and in histamine tolerance is happening first in the gut, which is where the majority of the interaction. Now, of course, there's stuff in our nose and our eyes, like there's a lot of other mass cells and they're in their skin. Yeah, mucousy areas again, the mucousy areas.

Michael Roeslein: This is what we call the science. Right. Yeah. But but like ratio wise, I don't think because like, we can't see the gut and we can't, honestly, we can't, our brains, I don't think can wrap their mind around the surface area of the gut. Verse, Kiran has thrown out some like ridiculous statements in webinars about like actual surface area of the gut.

And I know that I'm sure you know some analogies to about like tennis courts or basketball courts or some like massive amount of size. And then you're looking at like your eyeball, plus your mouth, plus your nose, you could have like 1000 eyeballs, noses and mouths, and it wouldn't equal one intestinal tract. So it may not seem when we say things like most of the contact with the outside world is in the gut. But the guts in there. Right. So how's that possible? But then it's the food, it's everything that we ingest and the surface area is like astronomical.

Steve Wright: Yeah, yeah, I don't know. It's between it's between a tennis court and a football field, something like

Michael Roeslein: that, which is absurd, because it's all like in my belly, which doesn't make any sense. So I just wanted to like say silly things to make people understand how big the surface area the gut actually is. And so that if this imbalance is taking place there and then brushboard or for anybody who's been around here for a while come into our webinars like brushboard or the gut damage, like, that's not something this is not the first time that's come up because that comes up all the time when it comes to digestion and absorption of food and other gut issues. But we're talking about the DAO enzyme, which is what breaks down histamines in the gut, right?

Yep. And so if you have that gut damage, I forget who I interviewed once, they talked about having your fingers cut off. Like that was their analogy is all these little fingers. And then they just get like grinded down and cut off. But the way they described it was like horror movie, ask and really graphic and I was like, man, I think we could talk about this afterwards and we could figure out a better way for you to teach this. But thank you.

Like if there were kids listening, they would have been terrified. So, but when this gets damaged, this is just one of a lot of things that can go sideways. But so you're just kind of like a perfect storm situation.

If somebody has this damaged gut, they have these chronic conditions that cause their body to respond stronger to things. So they're going to produce more histamine to the same stimulus which you mentioned, and then the gut damage makes it so they don't have enough of the enzyme that breaks down the histamine. So not only are they producing too much, they're not clearing enough and then it builds up and then we have these chronic situation, right?

Steve Wright: Yeah. Yeah. And the story is sadder than that. It's more frustrating than that, which is if you've never heard based on our genetics and just based on your lineage, you make a different amount of amylase digestive enzyme inside of your mouth and you'll probably have a better, you'll have a differential reaction to starches and carbohydrates based on your genetics.

Well, the same thing is true with DAO. They estimate at the current state of where science is in 2024 is that 16% of the population will be deficient forever in production of dimenoxidase. Like that's just your genetics. You were always given a body that doesn't break down histamine as well as it could. So even if you're running at your best and if you consider that the world may have gotten more toxic, may have gotten harder to live in for our immune system and for our nervous system, you might kind of always be struggling basically.

In other words, it doesn't matter what you do. You can live in a bubble and you may still not be able to break down the histamine that's being created on a regular basis, just genetically speaking. And then if we roll in lifestyle factors, so if you drink alcohol, if you're on certain drugs, if you have, we just talked about gut inflammation, but also if you have some nervous system related issues, you can't really heal, you can't really calm your nervous system down, all these different things begin to decrease the amount of DAO you would naturally make. So if you are supposed to make 10 units of DAO on a daily basis to get rid of the 10 units of histamine, 16% of us are going to make like six or seven units. So we're always going to be building up too much histamine and not being able to clear enough and the equations never balance. And then if you drink some alcohol like I do, if you have some stress like I do, if you have some nervous system work to do like I do, then that unit production starts to go down maybe five or four units of DAO. And then so you have this, there's this idea of like the inflammation bathtub kind of like over, you know, filling up, filling up, filling up, and then you feel your familial history.

So like, let's say your family has migraines in them or they have joint pains or they have cardiovascular issues, whatever it might be like when the inflammation gets too high, it overflows on the floor, the water does, that's when you feel your genetic weak links. I think the same thing is true with histamine. We have this immense capacity to deal with a lot of histamine and be out of balance.

But if the water level gets too high and starts to flow over, that's when you get the chronic allergies, the chronic hay fever, the chronic eczema that, you know, you're always battling migraines, you know, the

ADHDs on a regular basis is much harder to control than if the histamine load was in balance on a regular basis. That makes sense.

Michael Roesslein: Yeah, the biochemistry is quite complex, but the concepts are very simple around this. And so it's just like a bucket, basically.

Steve Wright: And yeah, it's just it's just like a teeter totter, you know, you want it to be in balance, right? Yeah.

Michael Roesslein: So these enzymes we're talking about, I say DAO, you say the actual

Steve Wright: words, which are DAO is fine, but diamine oxidase. Yeah. Yep.

Michael Roesslein: That's what Steve said, diamine oxidase. Oh, diamine. Yeah. Okay. Okay. So I think we've covered, oh, food, we didn't talk a lot about food. So we're talking about food in histamine. When I first came across the low histamine diet, because I equated histamine with like, I'm having reaction to the pollen outdoors and my eyeballs are tearing. I don't eat the pollen.

And then people are like, Oh, you can't eat reheated meat. I think that was the thing or something like that. Yeah. Some strange thing that I didn't understand. And I was like, I don't understand that. So that's nonsense.

So I just ignored that for a while because it didn't make any sense to me. But then I started working with clients who were having histamine issues. So I had to actually look into like what high histamine foods are. So when we're talking about histamine and food, which then brings histamine into the gut where we don't have the enzymes because the border is damaged, what are high histamine foods that people commonly eat or drink?

Steve Wright: Anything that is high microbial count, right? So that's why leftovers are typically not allowed on a low histamine diet. And like, you know, like right now, if this is your first introduction to histamine intolerance, if this is like you're struggling with these chronic issues, you can't figure it out.

Try this. I mean, I know it sucks because you got to maybe throw away food or give it to somebody else, but just try stop eating leftovers. And it can really be helpful for a while. So anything that has a microbial component, that means things like wine, cheese, you know, kimchi, sauerkraut, any, anything that has a fermentation phase or component to it, that is going to be a very high histamine food. Typically, this also comes with things that have been like preserved. So some like preserved fish,

things like that will also just because of the microbial growth will create histamine related issues. But then you can just, you can Google high histamine foods and it's like any other diet out there, like there's the really high bucket, there's the medium bucket, there's the low bucket. And you might be surprised to find like a lot of like weird and random and also considered healthy foods like strawberries or avocados, things like that on the high histamine side.

And that's why I'm, I'm trying to say don't throw the baby out with the bathwater here. There are foods that are known sugar foods, which are all those fermented foods and leftovers that are like, like you're not going to die if you don't, if you don't eat leftovers, you're not going to have like some sort of serious malnutrition happen if you give up cheese and wine. You may have less smiles and, and you know, I don't know, happy afternoons or something without those things, but you'll be totally fine. When you start to look at the actual list of high histamine foods, if you try to cut those out for, for months and years and try to build a life around that, I think you can easily start to stack up malnutrition as well as microbial dysbiosis, because a lot of the, the healthiest foods, which is again, if you've attended any of my talks before, one of the reasons why I'm against elimination diets on a regular basis, and I'm trying to get people to, you know, grab the best ideas from each diet and then quickly move on to fixing the underlying causes and get back on those foods, because, you know, at some point after the histamine phase is over, you're going to realize that like, oh, I need to improve my microbiome.

I want to work on that because it's so important. And everywhere you go, you'll hear about fermented foods, yogurts and fermented everything. And so these foods exist for a reason they're helpful for our immune system for a reason.

We don't want to eliminate them forever, but it is really important to understand the tool set and how you can use it to get out of pain and buy yourself enough time to deal with the too much histamine production and the lack of histamine breakdown.

Michael Roesslein: Yeah, that makes sense. And yeah, we are not advocates of lifelong restriction diets around here. And it's pretty uniform. Now, it's been good to see that becoming much more of the standard opinion and advice coming from a lot of leading functional health people where like eight years ago, it was like, if you're not on a low FODMAPS diet, you're killing yourself and your children or some like, ridiculous sort of like thing and what I insert diet here.

Yeah. And then there were like the people and the member of the Facebook groups where they'd like fight over which one was better and then you couldn't have friends that were the. Anyways, at the early stages of the paleo world, things got pretty insane with various variations of, well, I'm paleo, but I eat butter.

Well, you need to eat outside then because I can't even be anywhere near butter. So at like, anyways, there's stories. That's podcast material right there. But I like that. And it but use it in the in the short run to try to help get things under control. So I think let me check my cheat sheet here.

Steve Wright: Yeah. And pay attention. Like if you're somebody who's like somebody invariably, somebody's going to ask me, like, how do I test for this? And you can't really. There's no, there's no.

Michael Roesslein: Look at the most accepted. Do you have these symptoms? Do you have them more after you eat?

Steve Wright: And then right. And then if you cut out certain things, like if you stop being leftovers for a week or you cut out alcohol for a week or something and you get better, like those are good. Symptom checking. Also, you could try something like a Dio enzyme, like we're going to talk about here in a minute. And if you feel relief, like that again is like the answer. Like, yes, that's positive.

Michael Roesslein: There's your test and it didn't cost \$700 like a lot of lab tests do. So, right. Yeah. Red wine's a kicker with, with, with histamine. Oh, yeah. That's a huge one.

I saw the disappointment in your eyes, but no, when it went like there's sadness there confirming that one. Okay. So we're going to talk about Dio enzymes. And when you told me that you were testing, I think it was like months ago, you were either testing this or you were having people sample it or we're trying it out a new product. And I was like, what's the new product? And he says it's a Dio enzyme for, for histamine breakdown. My first thought was those don't work.

Yeah. Was like my first thought, I don't even, I don't think I said it out loud, but I was like, but those don't work because back in the day when I was working with people with histamine intolerance, like there were a few of those on the market. And, and it was known that deficiency in Dio enzyme contributed to histamine issues and lack of histamine clearance. So they sold these Dio enzyme pills. And then I was like, cool, that makes sense.

I'll recommend these to people. And then I did. And like shit happened. Like nothing. Right.

And I was like, okay. And then I learned that generally those enzymes are quite sensitive. And if they, if they party with the stomach acid and they get mixed in with all the stuff, not very much functionality generally is left when they get to the place where they're supposed to do the things that they do.

And so I kind of wrote them off a long time ago. It's like, that's not a thing that works. And those things stick around too. So it's not like there's, there's things out there that like they sell that a lot of people buy that do this thing. And like, if you understand the mechanics of it, like it literally can't work. And they still, they make good money. We should have a show on that topic.

But so why don't three parts, I think you can handle it. Why don't most DAO supplements work? Why did you decide that there was probably a solution to this and you're the one who wanted to create it? And then what's different about the product you created and why does it work? Yeah.

Steve Wright: So I was with you. I did not recommend, uh, DAO to people because all of my initial attempts over the last five to 10 years just were so inconsistent. And then people would have to like mega dose. And like people get, I ruffle feathers on a regular basis telling people that the back of the supplement, the supplement box or the supplement bottle is not health advice. It's legal advice in that you should understand the product you're working with. You might have to take two, three times that, you know, whatever's on the back with DAO, people were taking like four or five, six times every meal.

They were taking like six to eight pills per meal to get the effect. And I just can't recommend something like that because I never know when it's going to work. And that's a lot of money. Like it becomes a lot of money really fast just to eat and live.

And to me, there's always a better way. And so for years, I focused on things like, look, if your vitamin D is low, you're going to make too much histamine. So, so, you know, use a D three supplement. If your gut is a, is a mess and you have low butyrate, like use a butyrate supplement or use prebiotics that make butyrate, you know, of course I'm very partial to try butyrinx.

But these things are like known ways that we could help make less, make less histamine or help improve DAO production. And then finally, this was about 18 months ago, I ran into a Spanish company that claimed to have an answer for the DAO woes that are on the market right now. And their, their stories like everybody's story, like remember, I always believe everybody's story, like, oh, I got the new, I got the new, new, you know, I got this cool stuff. And like, all right, well, let's play with it. Let's test it. And so my team, you know, part of working at Healthy Gut is being asked to sample all kinds of random ingredients from around the world because I sample them.

And then if it works for me, then I ask other people to do it just to verify. I'm not, you know, making it up. And it was true that we have several high histamine folks, mass activation folks on the team. And they were the ones that also had given up on DAO or using copious amounts of it.

And they were able to take like way less pills with this. And I was like, okay, cool. So let's dive into your research. And it turns out these guys have been working on the extraction techniques for like close to 10 years now, the preservation techniques. And you're right, the problems with the, the current DAO supplements is that number one, the extraction, it's a really sensitive molecule. So if you extract it at the wrong temperature or you allow oxygen to contact it, it begins to break it down rapidly.

And then it's also very sensitive to acid and stomach acid. And so that's where you need several things. Number one, you need a product that is extracted and protected properly. Number two, you need a product that is properly sort of protected from stomach acid. And number three, it needs to be packaged as best as possible to avoid any air exposure.

Because again, oxygen will eat it up quickly and break it down. So our product is nitrogen flush pack. So they're in blister packages. They are individually sealed with nitrogen. So there's no air in there.

There's no breakdown happening. They are enteric coated tablets or little mini, little, little mini guys. I should have brought some with me today. I don't have any in the room here. But they're little mini, they're 4.2 milligram dosages. So they're tiny, tiny little balls, but they're enterically coated with starch granules, potato starch granules and things like that to protect them from the stomach acid. And then their extraction processes is proprietary.

I don't even know all the steps to it or even some of the steps to it. But they didn't stop there. They went ahead and filed for 96 patents worldwide. They ran a bunch of studies on fibromyalgia on ADHD, on histamine related food sensitivity issues. And so they backed it up with actual research. And so we were able to strike a deal and license the ingredient and the product from them and be able to launch it here.

And so that's the only reason why we did this. Again, it was not, I had already given up on DAO enzymes as well. I was actually actually trying to, I've been actually trying to crack the nut of DAO enzymes, but like the options out there were like some crazy stuff out of Russia and Asia that had to be, it couldn't be below or couldn't be above negative 72 degrees Celsius. Like there was no way to work with it. It was just, it's a really difficult molecule to work with.

Michael Roesslein: And so- So ours must keep packages of dry ice on hand in home and keep their enzyme products on dry ice. And that will be \$385 a bottle.

Steve Wright: Right, right. Yeah, it was not a good solution out there. And so, yeah. And I think part of what sold me was working with them. We did some third party tests of the products on the market. And

what most people don't realize is that enzymes are not labeled by their weight or their volume, which is how the majority of supplements are. They're like milligrams, right?

Like 100 milligrams of ABC or XYZ. Enzymes are classified and labeled related to their ability to do their job. So how many units of activity are they able to have on the back of the label? And so you can send those into a lab and you can do third party analysis to see if what the product has is what the product has. And sure enough, the products on the market were way below what the label said. And this product tests above that label. And so that's, and that was backed up in our early testing with our teams and everything that we're doing on that front. So why people are going to say why or I'm trying this other brand and I, we haven't legally figured out a way yet to share this data. So stay tuned in the coming months. I'm going to figure out a way to release the data.

I don't know how to do it yet legally. But in general, if you're saying I've tried DAO in the past, it didn't work for me. Why is yours going to be better? Or I've tried DAO is, are you saying my company's product is not as good?

And I'm saying, yes, my product's better. And one of the reasons why is either related to how they package it, do they let oxygen come in contact with it? Do they protect it completely from stomach acid? Or do they just do a delayed release capsule or a partial protection from stomach acid? And those are, in my opinion, that's why the other products are not testing as well.

Michael Roesslein: We should have a show where we just like blow the cover of industry bullshit claims and other things that that's my ADD. But anyways, I think we both need to be wealthier first. Yeah, because lawyers, right? Because you buy first thought when you said I haven't figured out a way to legal, I'm like, I'll release it, give it to me, I'll publish it. And then I'm like, wait, he probably won't do that because there's a problem. And then it would be my problem.

So then anyways, side rant over, that makes a lot of sense. And knowing what a pain it is to keep it functional and make it function and everything, there's a lot of steps along that path, whether it's the actual quality of the ingredient to begin with or the coding or the packaging or any number of other variables. There's a lot of places where it could go sideways. That's why I like that you're a lunatic for details and research because that always ends up in my favor. And we always have the best stuff to put in front of our audience. So I think that makes a lot of sense. And I'd love to see that data.

I won't publish it or show it to anybody and I won't need a lawyer then. So I put in the chat because we're going to do a little bit of Q &A unless there's more you wanted to share about it. But I think that and it products called histaharmony. You guys have been testing it out. I saw an email went out and

you were looking for testers a while back. Like I'm guessing feedback has been pretty positive because if it hasn't been, you wouldn't have gone forward with it because I know you. So I'm guessing the feedback from your histamine folks has been pretty positive.

Steve Wright: And I know that you're going to have a lot of practitioners who utilize your stuff that are probably going to be integrating it with their patients who can't eat things. Yeah. Yeah. The testing has gone better than I hoped, frankly. And again, for most, for people who don't know me and don't know how I do, I am a stickler for these details. I feel like the details are what makes a great product. And I test it personally, then I asked my team to test it and then we recruit people from our community to test it. And if all those tests are progressing at like more than 50% of people are excited about the product and happy with the results. And we typically try to recruit people who are familiar with it. In other words, they're using a different DAL right now.

They're using a different enzyme. And I test the whole time versus then that's when we then we fully roll it out to the marketplace. So yeah, we're the team is posting the new, the new reviews are starting to come in because we got it on the market about 30 days ago. And it's really cool stuff. And I'm very excited for the folks that have this issue.

It can be, it can be a real game changer. And so the dosage and the studies for our product, again, our product is the product that is used in the studies. It'll be two to four per day and you can dose it either with food or away from food. And you should test that because some folks just have too high of a histamine load on a regular basis. So like, for instance, I have ADHD and I definitely do struggle at times with focus, especially in the afternoons. And so I actually have been reducing my caffeine usage and my stimulant usage, which is you don't know me, but I have a pharmacy with me everywhere I go and a lot of it stimulants.

And I've been reducing a lot of my stimulant usage by using like one to two tablets in the afternoon, which is when I start to really lose my focus. And so some people need to take it with food. That's when they have their symptoms and that's when it works best for them. So take it right before you eat or optimal dosing is 20 minutes before eating, but it can still work, you know, even if you take it with your first bite. And then for other people, again, like I said, if you're somebody who's like, like it's a full on allergy season where you're at, like take, take two away from food, take two with food.

If you're someone who has really bad sleeping issues and it's allergy season, you're like, I can't breathe when I go to bed, try one before bed. There's no set way to dose it. It doesn't need to be taken with food. It's going to do its work regardless of the food or not food.

Michael Roeslein: Make sense. I need to try it because my brain in the afternoon becomes like the monkey with the the symbols, you know, but because of where I live now, I have to work in the afternoon and the evening I can't work in the morning. And so like when my day starts is when my brain is like, days over, let's go and I'm like, but we literally just sat down. So we need some help. So I'm interested to see the effects.

So I need to get my hands on some I haven't been to the States since this came out. So I got to go smuggle do a smuggling run. That's what you should see my suitcase when I come back from there.

Like, what's I love it. It's like just boxes and bottles and it sounds like a giant pill container. This one wouldn't shake though as much and it's a box and they're in the little blister pack.

So there's 60 in the package. And I put the link in the chat. There's the link to histaharmony.

There's a link to the healthy gut shop Steve also makes like the best digestive enzymes and HCl support and the tributarin which is the butyrate and the I love it. I use it all the time now the the topical you sent me the B. So yeah, okay, cool. I like it.

It's good. There's that to for stress and calming down the topical and the capsules and there's the mag magnesium which I'm out of and I also need to smuggle back over here. I always underestimate how many of those I'll go through and then I run out of them before like my mental math of when someone else is coming. So those are all there.

We didn't want to just put the histaharmony on sale. So anything healthy gut, there's the healthy gut link to the healthy gut shop. There's the histaharmony link and there's a code there and you can save and order stuff and try it out. So that's all there. I don't have a ton of time for questions.

I'm going to try to get to some. It's late here and I think what I might do is where does the DAO enzyme come from? Distracted from pig. Yes, okay.

Steve Wright: Yeah, there's no this company's working on the first vegan version but the other legume extracts have not tested well. Okay.

Michael Roeslein: I'm going to...

Steve Wright: It's super small. So people who are like, I can't swallow. I have a kid. We have multiple kids on the team.

Michael Roeslein: We have multiple moms with kids. Speaking of lawyers, you're not supposed to be having kids on your team.

Steve Wright: We'll edit that out. Don't worry. I wish I brought one in here. I can go run and get it if it's needed but they're literally very, very tiny little tablets and so most of the people, most of the parents are putting it in apple sauce. Yeah, it's like literally smaller than most people's bites of food. Okay.

Michael Roeslein: So I'm going to try to answer, ask a few questions and then what I might have to do is send some of these questions to your team and then we can do a follow-up email for everybody who attended because there's more questions here than I have time that I can stay.

And I want to get questions answered and I know your guys are always awesome about answering questions. So I'm going to stick to the ones that are about histamine because there's like a ton of random questions in here. Is there a way to tell if histamine issues are primarily from foods or from something else triggering mast cells?

Can too much histamine be coming from other cells that are dysfunctional? My guess would be that does your symptoms change after you eat or is it more of an all-the-time thing?

Steve Wright: It could be, yeah, it could be in your environment and it could be your food. It could be either. So you would know this if you go to a vacation, you go to a family's house or something like you could have mold in your house and that could be definitely, you're breathing that in, you're smelling that all the time and that could be triggering histamine release all day long. But also you could be choosing foods that are very high in histamine. You can go, again, Google high histamine foods and again, if you just think about anything using fermentation or high microblode is going to be the worst offenders typically.

That's like an easy check. I would, again, I would not focus, obviously, figure out if you have mold in your house. Obviously, if you're struggling with this and you cut out chocolate and wine and sour crowd and all these things and you feel better, like leave them out for a little while, but then immediately start working on, okay, how can I handle these foods with some sort of mast cell stabilizer? And so as someone mentioned Corsitin in the chat, Corsitin is like the most commonly well-known mast cell stabilizer. But there's other ways to do that like tributyrinx. There's other ways like holoimmune that actually retrains your body, how much IgE is to make this sensitize.

Yeah. So like if I had a stack that was like the histamine stack, it would be histaharmony, which helps you clear any histamines you make. Holoimmune, which helps prevent the sensitization of mast cells to allergens and retrain them and tributyrin is a mast cell stabilizer. And so it basically is the weighted blanket for the hypervigilant mast cells. And of course, if you need antihistamines to get through the day, then use those, but don't use the ones that make you drowsy. So there's H1 histamines, first generation, those are your benadryls. Those are anything that makes you drowsy.

That means it's crossing your blood-brain barrier and it's going to cause choline-related diseases later in life, such as dementia and Alzheimer's. You can use the H2 classifications, which are the newer ones like Zyrtec and Claritin, to help you in these times. But if possible, I would avoid the H2, the ones that lower stomach acid. So those are also histamine reducing. But of course, if you don't have enough acid, you can't kill all the microbes that are on your food in the first place. And those microbes are what trigger the histamine in your gut later. And so it's a whole thing.

Michael Roeslein: We're going to make a map. That was very thorough. Will, how do you know what level of histamine you have? We said, I think this question is early in the webinar. You talked about this later in the webinar is really just going by symptoms. And if changing some of these things helps, then it's probably an issue.

And if it doesn't, you might be looking at something else. There are other markers on gut tests that point to histamine intolerance. Do they measure DAO enzymes in gut tests? Not that I'm aware of. They didn't know.

Steve Wright: No, you can get a serum DAO test, but it's only for research purposes right now. And like, generally understanding how fast is DAO fluctuate in the blood and in the gut and everything, that's not understood well.

Michael Roeslein: Terrible response to mosquito bites. Is that histamine?

Steve Wright: Yeah, it could be partially like anything redness, swelling, you know, red, you know, that kind of thing is potentially a histamine reaction.

Michael Roeslein: You're from the Midwest. Are you come from Michigan? Right? Yeah. How the mosquitoes in Michigan and so many. Jesus, they're like birds and Michigan and Wisconsin and Minnesota like Illinois is bad where I'm from, but like Michigan, Wisconsin, Minnesota, the mosquitoes are like birds. And then I moved to California for eight years and there's no mosquitoes.

And I'm like, this is amazing. I can just be outside. And I'm not getting mauled by mosquitoes. But then when I moved here, there's mosquitoes. And so I had no mosquitoes for eight years and then adjusted to life, sends up mosquitoes, Italian, and then they were back and I was like, man, I forgot how horrible this is.

Like I literally forgot that they just steal your fun away in the summertime. But all right, I'm supposed to kind of skim through. How does mast cell activation syndrome get diagnosed versus just having histamine intolerance? I don't know.

Steve Wright: I don't know if there's a gold, if there might be a gold standard diagnosis for it. I'm not aware of it because that's not necessarily what I specialize in. But there are some mast cell stabilizing drugs that can also be very beneficial for someone with mast cell activation syndrome. The names of them escape me when I search with the K, which is the most primarily prescribed one. But those with mast cell activation will typically need a low histamine diet from the worst offending foods. They will typically need a claritin or a Zyrtec stabilizer as well as a mast cell stabilizer drug for a number. Yeah, there it is.

Ketofin, ketofin, ketofin. Normally they'll need a cocktail of these pharmaceuticals because we didn't talk about this, but antihistamines block the entrance of histamine into other cells. So basically, just then you have a bunch of histamine floating around in your body. It's not able to go into the cells and it's not able to cause the redness, swelling, itchy eyes, racing heart, brain related things. But you are building up extra histamine and you're not clearing it as much. And so that extra histamine will bounce around and end up causing inflammatory cascades later. So it's a useful tool, but just understand what the tool is doing.

And that's where I, most people, it's not me. Most people are saying like, look, if you're gonna, if you're gonna try to stabilize the mast cell, meaning you're gonna try to allow it to make less histamine in response to the allergens, that's great. But we still need to clear it with some DAO and we may want to block its entrance into certain cells for their time being. But for those people who don't, they're like, it's like allergy season or whatever, they're taking Zyrtec, they're always having sinus related issues. And they're just like, why is this not, why is this medication not working? Why is this, you know, and I come from a family like this. I used to like wake up with my eyes swelled shut and have all kinds of seasonal allergies, which I don't have anymore.

And, you know, the reason why is you're still producing the histamine, you're just blocking its entrance into a lot of different places because the antihistamine sits on the receptor where the histamine goes in.

Michael Roeslein: Okay, that makes sense. So I was skimming through questions. Somebody's saying the code's not working. Mary Ann, can you get in touch with Charles Kim, who is having a saying coupon not applicable for selected products that should be all healthy gut. So I think you're still here. Mary Ann, we'll get that fixed.

If you have trouble, email Mary Ann at rebelhealthdrive.com and she will definitely help you out. Let's see if his, okay. Can you take your DAO if you have solicited intolerance? I didn't know if there's a connection there and there may not be, but this person is asking.

Steve Wright: So a lot of people ask that and our product so far seems to do very well. Anybody with solicited tolerance?

Michael Roeslein: Okay. My issues deep muscle itching feels like poison oak type itch. Yeah, the coupon won't work on the B serine bundle with both B serine products. If that's what you're trying to do, there's the topical in the capsules because that's already discounted. So that won't work if that's what you're trying to do. Has histaharmony been approved in Canada? And if not, you know if it will be approved anytime soon.

Steve Wright: We're not seeking approval for any products in Canada at the time being. We can ship to, in other words, we're not registered with Health Canada, but we can ship to Canadian Address.

Michael Roeslein: Which I heard is a nightmare to register with Health Canada. I remember when microbiome labs went through it and I got to hear the other side of that phone call a lot of the time. Will supplements ever be available on full script? Do you have any intention of going on there?

Steve Wright: We hope to one day we're in negotiations. They would like a lot of our profit margin, but our products are extremely expensive to make. Obviously if the other companies had access to this, they would have done it before us and they probably did get, they just turned it down because it doesn't meet the profit margins that most companies are willing to do. So we're in negotiations with other places, but it's just difficult at the moment.

Michael Roeslein: Yeah, doesn't make sense. Yeah, I've heard that about them that they take a high amount of margin. I think I'm going to just, I got to go, I'm getting some. And so I love Tributor and Axan, Holoimmune, they are great from somebody in the chat. Are there any other, there's no other enzymes in the product, right?

Steve Wright: Nope, nope. It's all, basically all active ingredient. And then the extra ingredient you'll see on it is all the enteric coating. And so again, people will say like, oh, I don't, I can't have any starch or I can't have any of these things. And I would say to that I 99% disagree with you in regard to this product because you're talking about like micro milligram amounts of like cellulose or potato starch or things like this. And it's all related, none of its flows, none of its fillers, it's all related to the enteric coating, which again is enteric coating means that it survives the stomach acid or essentially it survives usually an hour or two plus in simulated stomach acid tests and delayed release capsules or acid resistant capsules. So if you see a product that says a DR cap and you go to DR cap and say, Hey, can you send me your studies on your delayed release they do the same simulation studies and you see at around 40 minutes to 45 minutes, the capsules start to open up. And so if you know anything about digestion, you know that the food's going to be in your stomach, usually a minimum of two hours exposed to acid. So typically you want to have a product that's that can escape at least two hours of acid exposure in order to fully protect it.

And so that's one of my, you know, that's one of the things you'll see across the healthy gut lineup is that when it's needed, we do create the least toxic enteric coating processes that we can, that we can source.

Michael Roeslein: Okay. Yeah. And I know that stuff's important to you guys. Like, to the people that get upset about that, like Steve's one of your people. So like, he doesn't want to take a bunch of garbage either. That's why there's lower margin on these products. That's why it's expensive to make them. That's why all of it, et cetera, et cetera, and why they take a really long time for like, usually when I hear about like, hey, we're going to create this new thing.

It's a while before I see it. And it's because you go through these stages of testing and all of that stuff. So I'm going to, I copied as many questions, I copied the ones that are remaining from the Q & A into a document that I'm going to pass along to Mary Ann and ask her to get in touch with your team. And so we will do our best to pass those along and then we'll send that out when we have answers. There's not that many more that we didn't answer, but there's a handful. So we'll send those out to everybody who registered for this webinar once we have that.

So thanks, Steve. This is, I don't always learn a ton myself on webinars that I host at this point because I've done a lot of them and I've heard a lot of this stuff a lot of times. And this one I learned a lot.

This wasn't a subject that I really know much about. And I think I'm one of those closet histamine cases possibly, because I do have like some itchy skin sometimes. And I do notice that when I lay down, sometimes if I eat dinner late, I'll have, like you mentioned, the almost feels like swollen

sinuses. And but not like sick, like I'm not ill, like I'm not, if I try to blow my nose, nothing happens. Like it's just like the air doesn't have good, it's not good.

Steve Wright: So I'm excited to get some and yeah, it's not good. It's thumbs down. So I haven't been able to peg it, but I do eat a lot of leftovers. So I'll give it a shot when I go my next smuggling run into that. Yeah, we got it. We got to get you taken at least two holo me in a day and we'll get you on some histaharmony and I bet I bet that'll go away.

Michael Roeslein: Well, I'll load up when I'm when I'm there next, Mira's going in June. So she can come back with loads of smuggly smuggly goodness. So give your mast cells away to blanket quarter of the day. And thanks, Steve. Enjoy the conference. If you chase down Kiran, tell him we said hello. And I don't know which business he'll be there with at this point, he'll probably be promoting like five different projects.

So yeah, guys, I've got octopus of businesses. So cool. But thank you.

This was awesome. I appreciate you taking the time while you're traveling. I know how difficult that can be and have fun there. Enjoy the warm.

Hopefully it's not a thousand degrees yet. And everybody I put the links in the chat a bunch of times. We'll send it out with the replay tomorrow. So thank you, everyone. Thanks for all the awesome questions. Thanks everyone. Everything that everybody was here. We had 190 people on live in the middle of the day on a weekday, which is thumbs up new record. So thanks everyone. Talk to you guys later.