EP\_1265\_OMNI-BIOTIC\_AUDIO

**Dave:** You can predict someone's age by a lack of diversity in their gut bacteria

**Hannah:** without addressing the gut. There's just so many other things that you can't really address, like you can't calm down low grade inflammation in the body if you have leaky gut and you keep spewing toxins into your bloodstream.

So it's all connected, but the gut is a huge foundation to even things like that.

**Dave:** You already know your gut controls more than digestion. It shapes your brain, your immune system, even your metabolism. But here's what no one's telling you.

**Hannah:** Unhealthy human or in an unhealthy gut. For example, you have your good bacteria, then you have opportunistic bacteria.

**Dave:** You're probably still doing it wrong. You take probiotics, but then they don't work. Sometimes you eat ferin foods, but they're not enough. You try to heal your gut the way I did. But the problem isn't what you think. Henna Kleinfeld has spent years inside the microbiome industry breaking down what actually shifts gut health at a biochemical level and why a huge number of these so-called gut health products really don't work.

Your gut bacteria actually make decisions for you. Cravings, mood, sleep, that's your gut. Today, you'll learn how to take that power back, and the one upgrade that actually fixes your microbiome may be even for good, because if you don't control your gut, your gut controls you.

**Hannah:** 70 to 80% of our immune system originate in the gut, and I know that if my gut is not working.

Properly. My brain also won't be working properly. So if I started by optimizing my brain, but my gut was a mess, I really wouldn't be making any progress.

**Dave:** People talk about there being a gut brain and sometimes a heart brain, and then a brain. Brain. Is there a connection between the gut brain and the heart brain that you're aware of?

So ask yourself who's really in control? You are listening to the Human Upgrade with Dave Asprey.

Hannah, if you had a choice, you had to optimize either your brain or your gut. Which one and why?

**Hannah:** I would optimize my gut, because I know how closely the gut and the brain are related, and I know that if my gut is not working properly, my brain also won't be working properly. So if I started by optimizing my brain, but my gut was a mess, I really wouldn't be making any progress.

**Dave:** If you fix your brain, does it also fix your gut?

**Hannah:** No, but if you fix your gut, that will have a very positive impact on your brain.

**Dave:** Okay. People talk about there being a gut brain and sometimes a heart brain, and then a brain. Brain.

**Hannah:** Mm-hmm.

**Dave:** Is there a connection between the gut brain and the heart brain that you're aware of?

**Hannah:** Ooh. Um, I am, I don't think I'm aware of it, but you know, you could argue that if your gut. Is leaky or inflamed and you have toxins and other bad substances leaking into your bloodstream and your heart is filt, your heart literally pumps your blood. Then of course that would also be impacting your heart and really pretty much any other organ in your body.

**Dave:** There's definitely a vagus connection.

**Hannah:** Mm-hmm. The,

**Dave:** the vagal nerve, and then when the gut's leaky, you get the lipopolysaccharides and those create systemic inflammation, including in the heart and the pericardium. And so when the gut's off, you're gonna feel it emotionally in the heart and you'll also feel it with anxiety in the brain, at least in my experience.

Mm-hmm. Why is the gut important for you?

**Hannah:** Wow, that's a big question. Um, for me, I mean, the more I understand about the gut microbiome, if you take my journey back to kind of where this all started, I had a really bad case of Lyme disease in my early twenties. And for anyone going through that, it involves a lot of, at least back then, it involved a lot of antibiotics, months of it.

The Lyme itself destroyed my gut amongst many other systems in my body. And throughout this experience of repairing myself and my body and kind of recovering not just from the Lyme, but also the after effects of all the medications, I really learned that my gut was such a foundation to helping me get my energy back and helping to really, um, get me back to health.

And that really sent me on this path of my wellness journey.

**Dave:** I had really severe toxic mold, which. At the time, if I was exposed or re-exposed, um, within a day or two, like the lining of my gut would shed. Mm-hmm. Mm-hmm. And just my digestion was ruined. Uh, and I also had active Lyme disease, which I think 90% of the time is a root cause for Lyme.

Yeah. Mm-hmm. So it's funny, you treat the mold, most Lyme will get better. Right. Without antibiotics necessarily. Uh, and I was also an antibiotics for 15 years 'cause of chronic sinusitis and strep throat when I was horrible a teenager. So my gut was w wrecked similar to you, you know, mid twenties. I'm like, what is wrong with me?

My brain doesn't work, my gut doesn't work and

mm-hmm.

So we're both motivated by this. Let's not let other people go down that path unless they really want to. I've seen such an explosion in our knowledge about this. First there's probiotics and I've been on this for 25 years. Various flavors. Some work, some don't work, some we don't know.

And some of them actually made symptoms worse.

Hmm.

And then we come up with prebiotics.

Mm-hmm.

And then I've covered the launch of some of the latest postbiotics.

Mm-hmm.

And now we have perio out there. What is the difference between prebiotic, prebiotic, probiotic, and probiotic?

**Hannah:** Right. So probiotic is the live beneficial bacteria.

The definition of a probiotic is. Beneficial bacteria conferring a benefit to human health or to your, to your health. Right? And so that's the probiotic. The post biotic is the things that are made by the probiotics. So our good gut bacteria make things like butyrate, short chain fatty acids, and other helpful compounds that our body then uses.

That's considered a prebiotic. A prebiotic is the food for our probiotic bacteria. Mm-hmm. So that's, you know, things you can get from your diet, things in, you know, good fiber, but it's also things that you can take as form of a supplement, as a prebiotic supplement. And then you actually also have symbiotics, which are the combination of a prebiotic and a probiotic into the symbio symbiotic.

And there the idea is you are adding some prebiotics to your probiotic supplement to one, feed the bacteria in the supplement. And two, um, give some of these good fibers also for your intestines.

**Dave:** What about probiotics? I've seen a few of those on the market lately.

**Hannah:** Yeah. That's actually a term that's new to me.

**Dave:** Um, this is the idea that if you take dead bacteria mm-hmm. That they'll have a signaling effect kind of like, uh, taking a prebiotic Yeah. Where there're gonna be a signal mm-hmm. To your bacteria to do it. And it, it can be kind of confusing and I, I like to think I've spent,

hmm,

probably $200,000 on probiotics or prebiotics over the last 20 something years.

Mm-hmm.

And that seems like a lot of money. I've spent two and a half million dollars over 20 years on my longevity program. You don't need to do that every year, I don't think. Um, although maybe it would be nice or maybe it wouldn't be. So having tried all these things, this is one of the areas that actually is most confusing for me because how the heck am I supposed to know if a probiotic actually works or not?

Like how, how do you tell.

**Hannah:** Yeah, so that's a really great question. And you know, so many people who we talk about probiotics do they of, they often say, well, I tried probiotics and they didn't work. And one of the questions I always ask is, well, which one did you try? Because many times, you know, if you're just taking some random $20 probiotic off of a shelf at CVS.

But you're not actually thinking about what are you trying to accomplish with this probiotic? It's pretty likely that it's not going to work for your situation. So what I'm looking for in probiotics and what Omni Biotic really does as a company, we think about what are the health outcomes we're looking to optimize for, because we know that different strains, mm-hmm.

Do different things in the body. So a probiotic formulation for, you know. Helping restore your gut microbiome after antibiotic intake will look very different than a probiotic formulation targeting the gut brain axis. So that's 0.1. It's like how are these strains actually formulated and what are we hoping to accomplish?

The second step is clinical studies. Clinical studies in humans using the final formulation. So not just random strains, but the actual product that will show you, look, we've tested this in humans and this is the outcomes we've gotten. If you have a brand that does that, it's much higher likelihood that these products will also do that for you.

Okay. And then the third, you obviously also need to think about the delivery mechanism of the products because if you're just taking a beautifully crafted product, but it can't actually survive the passage into your intestines, it dies in the stomach, then that's, um, you know, not very helpful. So, um, ideally also you would be choosing a brand, um, that has tested.

There are delivery mechanism in lab settings.

**Dave:** I'm really happy you talk about delivery mechanism. Some of my, uh, friends or sometimes detractors in the calories in calories out crowd, they get really mad. I'm like, well, if it's just about calories in, what if I took all my calories and I wrapped them in a condom and swallowed them?

Hmm.

I go, what? But you can't absorb those. That doesn't count. I'm like, oh, so absorption of calories mm-hmm. Is what we're paying attention to. That means not all calories are the same if it can't be absorbed.

**Hannah:** This is a good point.

**Dave:** And and it's the same thing with probiotics. Mm-hmm. Because if there's 20,000 or 20 million colony forming units in a pill when it's manufactured, they may not be there when you take it.

Yes. And maybe they need refrigeration, maybe they don't. Maybe they're spore forming, maybe not. Mm-hmm. But if you put it in your mouth, are they gonna change what's in the gut? And I don't think the answer's the same for everyone. 'cause if you took it with a meal Yeah. There was stomach acid you took without a meal, there wasn't.

Mm-hmm. The reason I wanted to have you on, or one of the reasons. And this thanks for coming here in person of this, this episode of you've been on before, um, is to talk about the delivery system that you're using with Omni Biotic, because there isn't another company doing that, that I'm aware of. Why do you do it and how does it work?

**Hannah:** Yeah, so I mean, you, you exactly said it. If, if you, the probiotics should or can't, the probiotics need to be alive in order to have that benefit in your intestines. And many probiotics are freeze dried, which means all the water is extracted out of the bacteria and they're essentially in this dormant state.

The first liquid that these freeze dried probiotics come and touch with, they will soak up because the idea is that that's supposed to kind of rejuvenate them and give them life. If, however, that is your stomach acid in your stomach, because maybe it was the probiotics were in a capsule. Capsule opened in the stomach.

Your probiotic bacteria find the stomach acid, they soak that up and the majority of them dies, and then they don't reach your intestines. With omni biotic, our delivery mechanism, it comes in a powder. You rehydrate the probiotics in water or another neutral liquid prior to intake. Our powder also contains some important prebiotic nutrients, so essentially the probiotics wake up from the slumber, they rehydrate with the water, and then they also find their favorite food, and that actually makes them really strong for their passage through the stomach acid and ensures a much higher survival.

We tested this in a GI simulator. 83% of omni biotic bacteria reach the intestines alive and active compared to 7% on average, across 10 other leading brands.

**Dave:** So you're getting about 12 times more live bacteria. Yes. When you do the omni biotic approach, and I hate, I. Putting powders from little packets into water.

Mm-hmm. And there's like 20 companies, like here I was sitting a packet. How many of you I couldn't even drink all the liquid with all that stuff. Mm-hmm. So other than electrolytes, which I put in all of my liquids or just salt, um, yours, the antibiotic is the only one that I'm willing to do that with regularly.

And the reason is that, oh, it's going to work. Mm-hmm. So I take a little packet and I mix with water and I wait 30 seconds. Yeah. And I get 12 times more versus if I'd have taken a pill. Mm-hmm. So, okay. That's a trade off that I'm worth doing.

**Hannah:** Worth it. And you know, the other thing is. You can mix it in fairly little water.

I mean, some people will do a whole glass, four to eight ounces. I usually do two ounces and then it's really almost like taking a shot of water. Okay. And then, um, you know, some people like to take it in the morning. First thing. If you do it on a whole glass of water, you kind of kill two birds with a stone.

You hydrate while doing it. So it's, it's fairly simple to incorporate into your routine.

**Dave:** The other thing that I, I like, the reason I wanted have you on is that you run one of the very few probiotic companies who has very function specific strains and I've for years said, alright, how do I fix my gut after antibiotics?

Mm-hmm. I don't usually need to take them, I don't like to take them. I just had a substantial surgery three weeks ago. I had 28 square inches of skin left over from when I was obese, removed from my face and neck. That's a lot more than you would do in a normal facelift. Mm-hmm. This is, I did that plus a bunch of longevity stuff.

But of course you take antibiotics when you have large amounts of skin Yeah. Just removed from your body. So I was thinking, okay, I have a lot of probiotics floating around 'cause people keep sending 'em to me. Right. And I do take a few weird unknown strains to mm-hmm. Raise glutathione or something.

Mm-hmm. But I'm like, how do I restore my gut bacteria? And it was cool because you sent me your newest strain, which is called AB 10, which is specifically for what do you do post antibiotic. And something interesting happened, and I literally did this yesterday, not because we were recording today, just because like it had arrived.

I'm like, oh, I should do this. So, um, I took them around too, and I don't get brain fog. Mm-hmm. Almost ever. I, I don't get those kind of brain, brain out. I'm like, ugh. And I was tired about two hours after I took it. I'm like, well, I'm, I'm a little bit tired here. I laid down for half hour, did some rejuvenation things, and my brain came back online.

Uh, and then I got an amazing night's sleep and I woke up and my gut function is much better than it was before. It wasn't that bad before. Yeah. But it was a really noticeable difference. Hmm. Why? If someone takes probiotics like that mm-hmm. Why would I have been tired for a little while after I took it?

**Hannah:** Your body was just going through a lot. You mentioned you had surgery. Yeah. Because of you had to take antibiotics. They definitely did something to your gut. It's possible that with these new good bacteria, that your gut was kind of going into a bit of a rejuvenation and restore mode and you know, you, because you're also very tuned into your body.

You just felt that as, ooh, I need to take a little rest and actually help my body kind of take that opportunity to recover and rejuvenate. And then, you know, you, as you said, you got a good night's sleep and you're feeling really good today.

**Dave:** It's okay if, if someone does a, a probiotic or something like that when there's a rapid shift in the body.

Mm-hmm. You can be tired for a little while. Yeah. And that doesn't, it's not working. It actually means it probably is working.

Mm-hmm.

But if I had taken it and I just felt like crap for days and days and days, that would've been something different. Do, do people get that from some probiotics on the market?

**Hannah:** Yeah, so actually two things I wanna say to that. The other thing, by the way, it's possible with, you know. We know that people after surgeries when they're taking antibiotics, it's also quite possible that your gut was just contaminated with potentially something slightly pathogenic. Mm-hmm. But because you're in very good health overall, maybe you didn't immediately feel it as other people would feel it.

But then when you send in a probiotic that restores and fights that off, it could have also been that that fatigue was a bit of like your body defending, um, against a potential pathogen. Now to your question, um, do other people get that? One thing that I hear often, actually two things when like with regards to bad reactions or weird reactions to probiotics.

One people will say, oh, I'm, I started taking this probiotic and I started getting really bloated. And then I ask, well, what, what was in the probiotic? And then you hear, well, it actually had milk. Mm-hmm. And then I say, well, are you potentially lactose intolerant? And then you can see the wheels turning and they're like, yeah, yeah, I'm lactose intolerant.

I don't eat dairy. Well, if you then take a probiotic that contains milk that could have done it, um, and that, you know, again, wouldn't go away, if you are lactose intolerant, you're gonna have that reaction. The other thing though, which I think is also quite common, people who have. A gut that's in not good shape.

You have overgrowth of things like candida or pathogenic bacteria. If you then take a probiotic that actually works, that changes your gut microbiome back to something better, you will see die off effects. And you know, you people see that with other conditions. Like when I had Lyme, when you get that treated, you experience die off it basically.

Makes you feel pretty bad for a short period of time, but it's generally a sign that your body is healing. Um, it's tough sometimes to tease that apart when you're just your, your own self, kind of your own individual on your wellness journey. Um, but I've definitely seen that and also frankly experienced it myself when I had Lyme and my gut was in bad shape and I started fixing my gut and fixing all these things, there were periods of time when I maybe was feeling a little bit worse, but you know that it's heading in the right direction.

**Dave:** That idea of a, a healing response or a Herxheimer response. Mm-hmm. A lot of listeners have heard of that. It's the real deal, especially if you're dealing with really bad dysbiosis or with candida. If you kill a bunch of yeast, well, it's going to make a bunch of defense chemicals right before it dies.

Mm-hmm. And then you have all the dead stuff to clean up. And there are ways to help protect yourself by having a more intact lining of the gut, which is the function of good probiotics and good prebiotics, and mopping up the toxins. What is SIBO and what do you do about it?

**Hannah:** So sibo, small intestinal bacterial overgrowth, it essentially happens when bacteria that really shouldn't be growing in your small intestine are overgrowing.

There. There can be many different causes. It essentially just means something is off in your small and large intestine. And actually some of our researchers from Europe, they have seen that oftentimes SIBO goes along with an imbalance of bacteria in your large intestine. And then, you know, for some reason it's, uh, kind of creating this, um, imbalance in your entire digestive tract.

What to do about it depends on what practitioner you speak with. I've spoken to some practitioners who have an herbal protocol that can help with sibo. Um, other practitioners believe that it requires specific targeted antibiotics that kind of just go after those specific SIBO bacteria. But in any case, if you're using something to kill certain bacteria, whether it's.

Herbal or a real medication. Um, you want to make sure you support your gut microbiome with a good probiotic. In this case, I would again, go for Omni Bio AB 10 because it has those strains that help restore and rebalance the gut microbiome after disruption and anything like SIBO is definitely a disruption to your gut microbiome.

**Dave:** A friend called me yesterday and his girlfriend has SIBO that didn't respond to the normal antibiotics for it. He's like, what do I do? I'm like, well, you work with your doctor. But if it was me, I would take a broad spectrum nuclear antibiotic. Yeah. Kill everything in there, and then take AB 10. Mm-hmm. And some prebiotics and just repopulate or maybe do fecal matter transplant.

Yeah. If

you have access to that, which is quite expensive. Mm-hmm. So start out with something designed to restore

things. Mm-hmm. Mm-hmm.

How would somebody know whether their gut is just so wrecked that it's time to just reboot and start over, versus to push it in the right direction? With probiotics,

**Hannah:** I would honestly say work with a really skilled practitioner.

Do a stool test, do blood work. Just at that point, if you're really, honestly, if you're at that point where you're just not sure, you know something is really wrong, but you just don't know how badly wrong it is, I would say you need some sort of lab data to help you understand, is it just one pathogen, like a c diff or something that's making you feel horrible, or is your entire gut in so much inflammation and in such disarray that you might eat a full protocol.

**Dave:** Also, it could be you're eating something every day that irritates your gut. Oh yeah.

**Hannah:** Mm-hmm. Like

**Dave:** black pepper or oxalates, something like that. You also could have parasites. Mm-hmm.

**Music:** Yep.

**Dave:** Right? And you also could have bacterial overgrowth of bad stuff, and you don't know which one it is. Mm-hmm. Uh, and so unpacking all that, it's really nice to have a practitioner.

However, it's expensive to have a practitioner. It's. So let's assume that I'm on a budget.

Mm-hmm.

Okay. I know I have sibo. I'm farting death all the time. I'm bloated all the time.

**Hannah:** Yeah.

**Dave:** What's step one?

**Hannah:** I would say look at your diet, um, because you know, certain foods that you eat, um, can make your SIBO worse.

So there's this thing called a low FODMAP diet to essentially reduce these things that the SIBO bacteria feed on. Mm-hmm. I would say definitely, um, take a good probiotic just to kind of try to restore as much balance as you can otherwise, um, I would look into some of these herbal approaches to, um, targeting sibo.

This

**Dave:** is oregano oil, grape seed extract. Yes,

**Hannah:** exactly. Things like that. Um, I think there's even some specific formulations that are possibly called like SIBO X or whatever, like things that kind of make it clear that it's specific for sibo. And then, you know, I think a good binder to help sweep some of the dead stuff out is really good.

Activated charcoal. Yeah, something like that. Um, and then also as you said earlier, you know, there's other supplements that can also support your gut barrier. L-glutamine. Um, there's a aloe vera juice or liquids, um, things like that. Just anything to kind of strengthen your entire digestive tract.

**Dave:** So you do that and you take a good probiotic?

Yes. In this case it would probably be the antibiotic abt.

**Hannah:** AB 10. Yeah. And then, you know, depending on how low on a budget you are, there's also some stool tests that you can do without a practitioner necessarily. Um, however, I've found that if people do those and then they get the results back, they're even more confused than they were before because it's hard to interpret a stool test without really understanding the gut.

Um, but you know, that's something you could consider as well.

**Dave:** It's getting a little easier these days. You can take a stool sample and dump it into your favorite AI tool and just what do I know about my poop? And it's kind of amazing they, yeah, they do like an 80% job.

**Music:** Yeah.

**Dave:** Right.

**Music:** Yeah.

**Dave:** Uh, what do you think is gonna happen with AI and probiotics and our knowledge of the gut?

**Hannah:** I think it's gonna explode. And I think we're, I mean, we're already seeing this, there's so much research coming out every month, um, on the gut microbiome and how it's linked to so many different systems in the body. And I think with AI and just that level of intelligence, I'm hoping that both on the testing side as well as on the treatment side, that we can get more targeted.

Hopefully lower costs. I mean, some of these lab tests are still really expensive, so with AI, maybe we can find lower cost alternatives and then also making it more accessible to people who don't want to, or can't spend thousands of dollars working with, you know, a functional medicine doctor.

**Dave:** Do you think we'll ever get to the point where you can just use your phone or a similar device, like take a picture of your poop and know what probiotic you need?

**Hannah:** Ooh, that's a good question. I don't know. I mean, you can't see microbes, so that might be a, a stretch, but maybe one day

**Dave:** we can always remain hopeful.

**Hannah:** Yeah. I,

**Dave:** I always think something's impossible, but the amount of correlations we can do today, it's pretty phenomenal.

Yeah.

So it wouldn't surprise me if I like, tell us what you ate.

Mm-hmm. Give us a picture

of your poop and we'll tell you magic. Yeah. I don't anyone can do that right now, but I, I would like to see mm-hmm. Just our, our knowledge base expand as far we can at least be 80% of the way there. Say, maybe take this probiotic right. One of the things I did do as part of my stress resilience protocol, uh, when I was having this recent surgery, um, is I took the ONO stress.

Mm-hmm. And you have stress, you have detox and you have the AB 10. Mm-hmm. Am I missing, is there another one?

**Hannah:** Yeah. We actually have a few additional ones. We have ONO Power, which really Oh, I have that one too. Yeah. You know, that one. Um, that really targets oxidative stress. Then we have ONO balance, which is more for like overall immune support.

It's also really beneficial for people with constipation.

**Music:** Okay.

**Hannah:** Um, and then we have Omni Biotic Panda, which is for babies and young kids as well as during pregnancy. We haven't talked about that one a lot.

**Dave:** Wait, this is panda, like to stop strep bacteria kind of thing?

**Hannah:** No, no, no. It's just literally the panda bear.

We didn't come up with the name that was already existing. Got

**Dave:** it. So it's the QN. Yeah. It's just pandas for kids. And pandas is a really important thing that happens. Yes. In kids when they have chronic strep throat. Usually as a result of toxic mold. I know about it 'cause I had it as a kid, we didn't know what it was called.

But it gives you OCD and ODD because your body makes an autoimmune response to a protein on the surface of strep bacteria that causes changes in the brain.

Yeah.

And this is one of those things where the sinus microbiome, the oral microbiome and the gut microbiome, they're all actually integrated. Yeah.

And if something's wrong up here with kids that are likely to take antibiotics and they get more gut dysregulation, so I wish when I was a kid I would've had good probiotics because I probably wouldn't have got that panda stuff. Yeah. Which usually is, it's a behavioral disorder that they usually lump in with, uh, things like autism or A DHD.

Mm-hmm. And it's, it's a different thing. Yeah. But your panda formula is just cute. Pandas for bears. But taking good probiotics is likely to reduce kids getting actual panda.

**Hannah:** Yes. I mean, there's, I actually just was listening to a podcast on this in the functional medicine space, and you know, they are, those folks on the podcast were saying whenever.

A child or really anyone, even an adult, approaches them with any kind of spectrum disorder. They need to look at the gut because without addressing the gut, there's just so many other things that you can't really address. Like you can't calm down low grade inflammation in the body if you're leak, if you have leaky gut and you keep spewing toxins into your bloodstream.

So it's all connected, but the gut is a huge foundation to even things like that. Mm-hmm.

**Dave:** Ultimately, most of those spectrum disorders are. Chronic autoimmune neuroinflammation.

Yeah.

And that always happens over time when you have a leaky gut. Mm-hmm. And the wrong bacteria growing and it can be caused by other things, either cause a leaky gut or directly cause the neuroinflammation.

So I've never seen anyone successfully reverse autism or even A DHD without improving the gut. Yeah. Maybe it's just improving the diet, which improves the gut. Mm-hmm.

**Hannah:** But

**Dave:** quite often it's a bacterial balance.

**Hannah:** Yeah.

**Dave:** Are you ever gonna come out with something like the Omni Bio, A DHD formula, or,

**Hannah:** oh, that's an interesting one.

I, I don't know. Um, I'll talk to our research team. Um, but you know, Theo stress release because it targets the gut brain axis, we have seen in clinical studies that that also ha helps stabilize mood, improve mood, and even cognitive focus, um, cognitive function and focus. So, um, we, we actually have practitioners also here in the US who use that with patients who are dealing with anxiety and kind of other emotional, um, disorders.

And they, many patients feel so much better, um, taking the product. Okay.

**Dave:** That would make sense if it's balancing the, the gut brain access. Mm-hmm. What would happen if someone with, we'll say an unlimited budget, just had to have, I'm gonna take all the biotics. Was that six of them you have now?

**Hannah:** Yeah, six or seven.

Okay.

**Dave:** Just mix 'em all up in a glass of water and take 'em. Is that worth doing or is, should you just pick the one or two that are most likely gonna work for you?

**Hannah:** Yeah, so first of all, I would say don't mix them in the same glass of water because, you know, you don't want the bacteria from one, um, of the formulations potentially compete in the same glass of water for nutrients with another formulation.

We know that bacteria can either work together in teams or they can compete for the same resources. So I personally often take one of the probiotics in the morning and one in the evening. Um, I generally think about two is fine. Um, after that it's, it's probably just a lot to keep track of and, you know, usually most people, if I say, okay, what are the one or two things in your health that you're really looking to optimize?

We can narrow it down to two omni biotic formulations.

**Dave:** I've got on the counter downstairs, you can see it when we, uh, when we finish. I've got power, stress, and AB 10. Mm-hmm. And I just kind of randomly take one of 'em. Mm-hmm. I'm not sure that I'm that structured About twice a day. Yeah. I just, whenever I think about it mm-hmm.

And I think my stomach's mostly empty. Mm-hmm. I just kind of mix with water and chug it. Mm-hmm. Like I said, a two ounce shot.

Yep.

Okay. What percentage of, what's in one of those packets is prebiotic versus the actual bacteria?

**Hannah:** The majority is, well actually. That's a good question. I would imagine, or I think the majority is the pre, the probiotic bacteria, and then we mix small amounts of prebiotics in.

So what's really important, people ask us this all the time. Mm-hmm. They say, so is Omni biotic also a prebiotic supplement that I would take if I'm fiber deficient? The answer to that is no. Um, a fiber supplement, a prebiotic supplement, usually you take like bigger scoops. Yeah. And it's just fiber. It's helping to, it's helping you meet your fiber requirements.

The prebiotic nutrients in the Homeotic powder are just the right amount to feed these probiotic bacteria when they're mixed in water and during that activation phase. So it's not the same as taking a full on fiber supplement. Okay.

**Dave:** When people are on low carb diets, they're usually also on low fiber diets.

Mm-hmm. Will probiotics work if you're carnivore or if you're on a low carb diet?

**Hannah:** Yeah, absolutely. I mean, I would say, you know, in that case you need to even more so, you need to make sure that you're supporting your gut, your digestion. Some people who are not getting enough fiber, they suffer from things like constipation.

Um, however, you know, fiber is really important as the food source for your probiotics. So if you're not getting that through your diet, I would say at least look at ways through dietary supplements that you can increase your fiber intake to make sure that the gut, gut bacteria actually have food to survive on.

**Dave:** When I was doing a lot of intermittent fasting and keto dieting mm-hmm. I measured the number and diversity of my gut bacteria. Mm-hmm. And I had relatively low number, relatively low diversity. In fact, you can predict someone's age by a lack of diversity. Mm-hmm. Their gut bacteria. So I had older person's poop.

**Music:** Yeah.

**Dave:** Uh, dynamics. Mm-hmm. Because of diet. So I added a prebiotic. I wanted up, uh, formulating and I was getting about 40 grams of soluble fiber, no insoluble, like sawdust kind of stuff. Mm-hmm. And it quadrupled the number of species of bacteria in my gut. And I took probiotics at the time.

Yeah. Yeah.

And I think there's a case for that.

There's also a bunch of people on the carnivore side are saying that there's no proof that we need a soluble fiber whatsoever. And actually in my first book, I put this study in there, collagen can be fuel for gut bacteria. Mm. So you don't have to have fiber if you get enough collagen. Have you ever looked at that?

Is collagen enough to grow bacteria or should people really be taking some. Some fiber.

**Hannah:** Yeah, that's a great question. I personally am not so much into the research on that. I'm sure our, you know, scientists in Europe might have looked at that, but not something I know off the top of my head.

**Dave:** Good deal. It is a pretty detailed question.

Mm-hmm. And it's when I've often pondered and I've gone through phases where I take a lot of, uh, prebiotic fiber and phases where I don't. Mm-hmm. I think maybe that's the natural way to do it, and sometimes I just do it based on how my gut feels.

**Music:** Yeah.

**Dave:** Okay. About five, six years ago, I invited one of the, the main scientists who ran the trial on GLP one drugs like ozempic or semaglutide for weight loss came on the show.

I did one low dose injection just so I could record the episode, and I felt nauseous the whole time and I hated it. And I've not used it for weight loss at all. I just used food. And I've seen different reports saying that GLP one drugs are really bad for your microbiome. Mm-hmm. Are they? And what do they do?

**Hannah:** Yeah. This is a really hot topic right now. Um, and I think, you know, I. It's something that's actually not talked about as much as it maybe should be. A lot of these GLP one drugs come with pretty significant GI side effects. Mm-hmm. And that's not surprising. If you look at how these GLP ones actually work, one of the mechanisms is they slow the transit time through our intestines.

So everything we eat and also our waste products, instead of being absorbed quickly and then the waste is being eliminated, it just sits there. Mm-hmm. And that creates, you know, it, it, it allows some pathogenic bacteria to feast and ferment. It creates fermentation. It can create inflammation in your gut and all that, you know, signs of that would be bloating, um, constipation or diarrhea, nausea, all these GI issues.

So, um, yeah, so that's one issue. It's just, just the working mechanism of these drugs can lead to these GI issues. The second thing, and for me, much more interesting thing is. GLP one Medications can also lead to what people call secondary dysbiosis. So what does that mean? That means it's dysbiosis. So an imbalance in your gut bacteria and overgrowth of these pathogenic bacteria because you were taking the medication.

And again, the reason behind that is the food is not being moved or all your waste products who are not being moved through your body as fast as they're typically moved when you're on these drugs. Just creating this environment for fermentation inflammation and overgrowth.

**Dave:** Oh, so you take a GLP one drug, it slows the speed of food moving through the gut.

Mm-hmm. So then the food spoils and then you got dysbiosis you wouldn't have had if you didn't have the drug.

**Hannah:** Exactly.

**Dave:** Is there something to be done about that?

**Hannah:** Yeah. So researchers in Italy actually just looked at this. Um, I had the honor of speaking with them a few weeks ago. They. Where they're running a weight loss clinic and they use GLP ones all the time.

And what they saw is that if they combine Ono ke talk in, in Europe, there's a half dose version of that called omni biotic meta talk. But in this, in the essence, it's the same as omni biotic ke talk. If they gave that to the patients before, like about four weeks before starting the GLP one, and then throughout the whole duration of taking the GLP one, they reduced the risk of that secondary dysbiosis.

And they actually also significantly reduced the side effects that these GLP ones generate in people.

**Dave:** Okay. I, I've been putting together this kind of stack of like, what do you do if you're gonna take GLP one drugs? Mm-hmm. And I wanna be really clear. Being obese is really dangerous. And there's people who say, oh, these GLP one drugs, they're so unsafe, like compared to being as fat as I was.

Mm-hmm. They're not unsafe, but they have side effects.

Yep.

So you could say, I'm going to choose to lose the weight by any means necessary, and I will deal with the side effects in a scientific way. Mm-hmm. So if you go to dave aspr.com/glp, um, the protocols there, that includes mitochondrial enhancement.

And I'm gonna ask the team guys, can you add the Omni Biotic, um, to our protocols that people can get from that? Uh, because, um, it's, it's just really important. I, I think it's. Fantastic. If people are gonna lose weight. I'm like, don't lose your muscle. Don't lose your bone mass, don't get dysbiosis. Don't wreck your mitochondria, but lose the weight.

**Hannah:** Yeah.

**Dave:** So this is a really cool addition to the protocol, so thank you.

**Hannah:** Yeah, you're welcome. And you know, I think it's so important because as you said, it's like if people choose to do that for their health

**Music:** mm-hmm.

**Hannah:** At the very least, making sure that you go in understanding how that impacts your body as a whole, and then that gives you the agency and the power to do something before it then turns into a further issue.

I think one of the biggest concerns in this dynamic for me is say someone is really dedicated to losing a lot of weight. They choose to be on GLP ones, they experience these side effects, they go through this. It's not an easy it do to me, it doesn't sound like an easy journey, but then they wean off.

Mm-hmm. But their gut in the process is wrecked because of that secondary dysbiosis.

**Music:** Mm-hmm.

**Hannah:** We know today that our gut microbiome is so important for overall metabolic health. You don't want these people then coming off of the GLP one and being left in a worse spot than before in terms of what their own body is doing for them, their metabolism.

So I think for me that's, it's just about empowering people to know what are the impacts, and then being able to proactively work against them. It,

**Dave:** it makes so much sense that you, you want to heal your gut and heal the rest of your biology after you go off the drugs. Or in my case, last week, or maybe actually two weeks ago, I started using a third generation GLP one.

Hmm. I am around 5% body fat. I have no need to lose weight. I'm using an extremely low dose. Mm-hmm. And I'm doing it for longevity reasons. Mm-hmm. Because they have all kinds of anti Alzheimer's and anti even cancer, really good effects at tiny, tiny doses that wouldn't cause weight loss. Mm-hmm. So I'm experimenting with that.

I don't think that's gonna harm my gut, but I take antibiotic and a bunch of other gut health stuff anyway, so I'm not that worried. Do you use GLP one drugs?

**Hannah:** No.

**Dave:** Okay. Got it. Would you use 'em for longevity if there was good science?

**Hannah:** I'm not sure. I'd wanna understand honestly how it impacts the body overall and also for the long term.

But you know, I do think I. I'm, well, I can say for myself, I'm very interested in making sure my own metabolic health is where it should be and where I want it to be. And understanding even more so now where we have these nuclear clinical studies coming out, just understanding how a dysbiotic gut can increase insulin resistance, can mess with your hunger and satiety hormones.

Like there's so many things that connect the gut with our metabolic health. That for me, as I'm interested in metabolic health, I of course also need to look at my own gut.

**Dave:** You're reminding me of a, a really cool and, and little known fact about gut bacteria. Um, there's a, a group of like. Actually, there's several groups of online nutrition bullies.

You have like the hospital food. Mm-hmm. American dietician people. And, and most of the time you're like, dude, you're responsible for McDonald's in hospitals. Don't, don't talk to me. That's not a problem. And there are good functional dieticians. Mm-hmm. Out there, just fewer. Then you have like the low carb, angry echo chamber crowd.

Mm-hmm. Right? And then you have the vegan bullies and you have the keto bullies. Mm-hmm. Right. And there's a couple carnivore bullies, but not as many. Right. And they're just like, anyone who doesn't agree with me. And, and it's like just these like shouting chambers. So some of the low carb or keto guys where we're saying, Dave, you know, you don't have whatever degree, so you have to have a mechanism to explain my calories and whatever.

So I said, you know, I'm happy to give you the mechanism. I'll publish it in my book because you don't know about it.

Mm-hmm.

So then I published the book and the guy comes like, Dave, you said you were gonna tell us. And I responded, fi off FIAF. Right. And. He kept trolling me and I'm like, dude, I just answered your question.

You don't know what it is. And it stands for a fasting induced adipose factor. Hmm.

And

it turns out your gut bacteria, they're sending this factor into your liver. Your liver is supposed to make it, but your gut bacteria, they're like, well, we don't have any food, so let's manipulate your behavior by secreting extra FI off.

Mm-hmm. To give you more hunger than you should have if you don't have the right bacteria in your gut.

Right.

And this is a mechanism by which fasting is helpful, and also having healthy gut bacteria is really meaningful because they're not going to amplify your hunger signals with FI off. And so I think the more you fast or the more using GLP one drugs, the more important your probiotics are.

**Hannah:** Mm-hmm. Does

**Dave:** that make sense?

**Hannah:** Yeah, I could definitely see that. I mean, you e with either one of these, you just want to make sure that. You are counterbalancing some of those effects that these interventions are having?

**Dave:** When I had this, uh, recent surgery, uh, they gave me a pain killer that had a risk of GI bleeding.

Uh, and a lot of the non-steroidal anti-inflammatory drugs do that. Things like ibuprofen, aspirin, all that stuff. And I didn't need really any painkillers for the most part. It was kind of ridiculously not painful, even though it looked really bad on Instagram. And uh, but I did take it for a few days and they gave me a proton pump inhibitor with that.

Mm-hmm. And I threw that away because Good for you. Proton pump inhibitor drugs seem really nasty, but I replaced it with another stomach acid blocker called Pepcid ac, which is an H two blocker that does something similar. And we know that blocking stomach acid, when you take an ibuprofen or a naproxen or aspirin, it's gonna stop the GI bleeding.

**Hannah:** Mm-hmm.

**Dave:** Why are proton pump inhibitors so bad for you?

**Hannah:** Yeah, well, you know. Just, I'm guessing everybody knows here listening to this, but proton pump inhibitors really are generally one of the solutions for people who have acid reflux or heartburn or even, um, you know, gastritis, things like that. So it's when something is off in your stomach and.

What we don't necessarily think about is that the stomach is one of our first gatekeepers. To what? To everything that we put in our mouth. And one of the biggest purposes of the stomach acid is to kill things that we don't want in our system that could make us sick.

**Dave:** Oh yeah.

**Hannah:** So if you're taking an acid blocker or a PPI, you're lowering the amount of stomach acid that's in your stomach, which essentially makes it so much easier for those harmful pathogens to get into your body.

And what we actually see is many people who are on PPIs, especially over a long period of time, they have dysbiosis and imbalances in their intestines because they have less of this stomach acid that can keep those unwanted pathogenic bacteria out. Mm-hmm.

**Dave:** One of the things that I've written about in my longevity work is that as you age, your body naturally makes less and less stomach acid.

Mm-hmm. So older people have more gut issues because they don't make enough stomach acid. A symptom of low stomach acid is acid reflux. Mm-hmm. Because when you have enough stomach acid, there's a valve at the top of the stomach or a sphincter that'll close off. Yeah. And prevent stomach acid from irritating your esophagus.

I had really bad, uh, issues with, uh, acid reflux in my early twenties. Mm-hmm. And of course they gave me, uh, either, I don't remember what it was back then, but it was either a proton pump inhibitor or an H two blocker. And I took it for a couple years and realized this is wrecking my health. And then I did the research and realized.

If I could increase my stomach acid mm-hmm. I would stop having heartburn.

Mm-hmm.

And the protocol for that is to take something called betan hcl L mm. Which is basically stomach acid in a pill.

Mm-hmm.

So I take about two grams of that with every meal. Mm-hmm.

Which

makes sure that I'm sterilizing the crap outta whatever I eat.

Mm-hmm.

And this is a really good idea, but I wouldn't take that if I had just taken antibiotic. I'll take antibiotic, wait a half hour until it's end of the gut where it goes. The stomach acid stays in the stomach and it gets neutralized. When it leaves the stomach, your bile goes in, which is highly alkaline and takes out the acidity so that the gut doesn't get sterilized.

Right.

**Music:** Right. Mm-hmm.

**Dave:** And a lot of people just don't understand. Your heartburn is caused by low acid, not high acid. And if you block all acid, you won't get heartburn, but then you stop digesting protein and you can like poop your food out undigested because there was no acid. It, it's really a bad thing.

**Hannah:** Yeah. It's all about balance. You want the right amounts.

**Dave:** What about things like Pepcid, the H two blockers versus proton pump inhibitors? Why are PPIs even worse than something like a Pepcid?

**Hannah:** I'm actually not sure the detailed research on it. Um, yeah, what what's your take?

**Dave:** Um, it looks like they increased SIBO much more.

Oh, I could see that. And that the proton pump is involved in many other processes. So my long covid or mast cell, uh, protocols are just for general mold and chronic fatigue, or even Lyme. Mm-hmm. Like you should block your histamine response for six months. Mm. And that means you take a Pepcid, which is an H two blocker.

Mm-hmm. And you take a Claritin, which is an H one blocker, so you block two of the three kinds of histamines so the body can chill out. Yeah. The immune system can, problem is you'll have no stomach acid. Mm-hmm. So during the protocol, every single meal religiously. You take betan hcl l so you don't lose the problems with the gut.

Yeah. And I've seen people just have crazy results. Usually it's about five months in because that's the amount of time it takes for your mast cells to die and be replaced with new ones. Um, but I wouldn't wanna use a proton pump inhibitor 'cause it'll have systemic effects.

**Hannah:** Yeah. That's smart. That's a really, that's a really good approach.

I like that.

**Dave:** And of course if you did that and you weren't taking probiotics mm-hmm. Your gut's gonna probably be wrecked anyway. And if you're working on healing something like chronic fatigue or mold or Lyme, there's, you can just guarantee that your gut is wrecked. And the reason you can do that, if it's mold, mold makes antibiotics.

Mm-hmm. That's where penicillin comes from. That's where most of 'em come from. So if you're breathing the stuff in, there's a pretty good chance your gut bacteria were disrupted.

**Music:** Yeah.

**Dave:** That means you have to take a probiotic to bring them back online when you want her to be.

**Music:** Right.

**Dave:** Are there specific probiotics that work best for mold or Lyme? 'cause you've had Lyme I've,

**Hannah:** yeah. Well, so I think I would always approach it from the perspective of like, where in your journey are you? If you are working, you know, for example, with Lyme, you're taking antibiotics. I would say 100% take antibiotic AB 10.

However, for many people who I've spoken to who had Lyme or even other, you know, mold, other things that they're working on treating, there's often a point where. You are just, you're done with the act of treatment, but you're just kind of in this phase of like generally repairing. And many people at that point suffer from brain fog and just really bad concentration issues and focus.

And then I would say switch from something like AB 10 to ONO stress release because that really targets that gut brain access. I saw it. When I was in that part of my Lyme journey, I was, I started taking Omni Biotic a, uh, stress release and within a few weeks I could feel, finally feel my brain come back.

And I was thinking, again, at the speed that I was used to thinking before I got sick, which was amazing because for months I thought I, for, I literally couldn't remember three things going to the grocery store. Um, and so that was really incredible to see and feel. And then, you know, I think for people with mold, because when you're detoxing from mold, you're also really taxing your detoxification organs.

I would say almost consider taking Omni Biotic detox because that's our gut metabolism, gut liver support probiotic. Um, and we've seen witho ke it reduces endotoxins. It improves cardiometabolic markers. So I would say that's probably a good go-to.

**Dave:** I just had the guys from Deliverance on the show, they make a specific set of herbs for.

Um, making your liver healthy.

Mm-hmm.

And I take, um, I take those compounds. Uh, I also take, he talks and I know a lot about health and do all, all the things, and they do a clinical grade, uh, fibrotic liver scan. And they said, I had the youngest liver of anyone they've ever measured. They said, Dave, you have the liver of a 10-year-old.

Mm-hmm.

Right. And I think it's because my probiotics are balanced. Thank you. Uh, and because I take a bunch of the right digestive stuff and because I take the right herbs. Right. And also because there's this weird superfood beverage called coffee that's correlated with great liver health. Mm-hmm. And I kind of do that.

**Hannah:** Yep.

**Dave:** Uh, so, and you're lo

**Hannah:** you're eating low toxin. You know, you're just general, you're not really the kind of person who would like burden your liver with, you know. Yeah. Things that. You expose yourself to,

**Dave:** I like to huff ax body spray. You know that

**Hannah:** and have the, the plugins, the scented plugins everywhere.

God, yeah.

**Dave:** Drives me. CR or like the, the Ubers. Yes.

**Hannah:** I'm

**Dave:** to the point where I'm like, see that little pine tree? Mm-hmm. Could you put it in your glove box please? Mm-hmm. Like, it's giving you small testes. And I tell the drivers that, and then they, wow. And then

**Hannah:** that's a good one.

**Dave:** Uh, actually I don't say that, and I have a high writer rating, but I'm just like, Hey, man, I, it gives me a headache.

Yeah, please. And they're usually pretty cool. But yeah, that stuff matters over time. Mm-hmm. How much do you think glyphosate in our food is disrupting our gut bacteria?

**Hannah:** Ooh, yeah. I mean, I think a lot of the toxins in our, you know, glyphosate is being sprayed on so many crops. Um, and it's, it's a, it's a pesticide.

It's supposed to kill things that. Like mold and other things that would otherwise grow on, on these crops.

**Dave:** It's an herbicide, right? Oh, an

**Hannah:** herbicide. Sorry. It's an herbicide. Um, but still it ha it's supposed to kill. Yeah.

**Dave:** It's also an antibiotic. They don't call it, it's an

**Hannah:** antibiotic. Yeah. So I mean, yeah, I think it's, you know, ex we've, we see, when you look at the health of our gut microbiome today versus a few, you know, even 30, 50 years ago, it's not trending in a good direction.

Mm-hmm. And when you look at the, just the sheer amount of environmental toxins we're exposed to on a daily basis, it's wild. And all of that also impacts our gut, or again, the gut bacteria are living things. So, you know, um, we just, we can't forget that

**Dave:** it, it drives me nuts because Bayer, which is a company that was one of five companies that split out of Ag Farbin, which is a Nazi era chemical company with not a clean history we'll say.

Um, but Bayer splits out, they understand biology in humans very well. They have all kinds of people studying the gut. They buy Monsanto and then they have the gall to look you straight in the eye and say, glyphosate doesn't have any effects on human health because it only affects the shit pathway.

Mm-hmm. Which is only in bacteria, so it won't affect humans. And you're like guys, your own research people at the company that bought Monsanto. You know damn well that we are dependent on the bacteria in our gut. And to say that we're separate from our gut bacteria is scientifically fraudulent. Mm-hmm.

At that point. And that's why there's $10 billion and counting of settlements against Bayer and Bayer. You need to clean up your act on this stuff and I hoped, I hope to help. That as long as you are selling glyphosate or its derivatives, that you get sued into oblivion. And I also hope that the farmers who spray your stuff, mostly large industrial farmers, are also held accountable.

And I think there might be a new regime in the US who's gonna make that happen. So stop making the stuff that's poisoning my gut bacteria because I take that personally. What do you think? Accurate?

**Hannah:** Possibly. I mean,

**Dave:** look at you preserve your brand.

**Hannah:** Um, yeah, I mean, we wanna be conscious of what we're putting into our body.

Don't

**Dave:** piss off bear.

**Hannah:** Um, no. We wanna be conscious of what we're putting into our body and you know, I think one of the things that I just as a consumer struggle with is. Understanding what we're putting into our body because you know, there's, yes, there's organic, but what does that really mean? And you know, unfortunately I wish I could grow all my own food and really know, but even then, how would I know that, you know, what's in my air and what's in my soil?

So I think, um, just being more conscious of what we're putting in our body. But I think also kind of understanding that there's certain things that are a little bit outside of our control, and then just figuring out what can we do to biohack our health? What are the supplements? What are the things we can do with diet, with stress management to just kind of, um, dampen these effects from our environment.

**Dave:** Would you be up for talking with your research scientists about making a probiotic that specifically helped people handle glyphosate or gluten better?

**Hannah:** Yeah, I think that's very interesting.

**Dave:** So one of the things that I've noticed, I've been traveling a lot around the world talking about longevity. I. And I was just in Dubai.

Mm-hmm.

They

use European wheat now it's a different species of wheat than American wheat. Mm-hmm. We use hard wheat here and almost all wheat in the US is sprayed with glyphosate. Yeah. Which is bad for your gut bacteria at the end of the crop. So it's just right in there. And they're even like, apologize for poisoning the grain right before you eat it.

So I can go there and I can eat whatever I want in terms of gluten. Mm-hmm. I still have dairy issues there so I can eat like. Actually, in 10 days I ate something like two kilos of bva.

**Hannah:** Amazing.

**Dave:** My blood sugar might have been high, but I'm like, this is so good. Yes. And I'll just take some herbs and berberine and whatever else, and I'll just manage it.

No gut issues whatsoever. Mm-hmm. And I come back here and I eat like a teaspoon of American wheat and my gut just gets shredded. Mm-hmm. And I know it's not just the gluten.

Mm-hmm.

Right. I take gluten enzymes too. So I think that there's something that you can do if that's a target with probiotics. Yeah.

To actually help Americans be more resilient. Mm-hmm. As we work on fixing our soil and our food supply. Mm-hmm. I would spend a lot of money personally on that. If you could let me eat. Like a piece of bread at a restaurant in the us. I don't think it's gonna be good for me, but I'd like to be able to.

Yeah,

**Hannah:** I hear you. I miss gluten. I, I, since my lime, I am very gluten intolerant and I dream of some of the things I ate when I was a kid. And you know, I grew up in Germany and there it's just gluten's everywhere and it's such a big staple of, I mean in a lot of places in Europe it's such a big staple in the diet.

So I miss it.

**Dave:** I did something last week. I was like, you know, if I can eat, if I can eat it there, how hard could this be? So I bought some organic French wheat, which doesn't have glyphosate in it, and it's the good species. And I made sourdough myself and I ate it with zero negative health effects.

**Hannah:** Mm-hmm.

Wow.

**Dave:** That was crazy. 'cause I'm someone who could not touch gluten.

**Hannah:** Mm-hmm.

**Dave:** And I, my probiotics are balanced and I'm taking gluten enzymes and all that. I don't think I'm gonna do that on a regular basis. But what's interesting is white flour is very, very low in oxalate. Mm-hmm. Which is another compound that shreds the gut.

**Music:** Yep.

**Dave:** Are you equipped to talk about oxalate and digestion?

**Hannah:** Not in depth.

**Dave:** Okay, good. We won't, we won't go too far in that direction. Mm-hmm. We'll just say that there's a good number of people who will have like a super food smoothie with almond butter and spinach and kale and beets and all these things, and then they're like, oh my God.

And then they have to poop. Yes. Like there was razor sharp calcium crystals in the gut that caused a lot of those issues. And then their joints hurt and they get brain fog. I was one of those get skin stuff, but we think long ago that humans could handle more of that, uh, because we had something called ox aob backer form Genis.

Mm-hmm. Which is a species. I know one guy years ago who ate some duck poop to try and get those probiotics. Do not do that. You'll get parasites. That's disgusting. Um, and there was a company in Europe who was trying to make a probiotic with this, and it was available for a year, and then they took it off market and wanted to make it into a drug mm-hmm.

For kidney stones. Mm-hmm. So I don't know what happened to them. Um, and I don't think bacteria in the gut are that big of an issue for that, but I suspect that if we could go back and look at the human microbiome for a hundred years ago, it might be different. Yeah. So I'm, I'm interested in creating this like super power.

I want to eat like garbage. Yeah. And still have a functioning gut.

Mm-hmm.

Why can some people, including some of my friends, just eat the worst, crappy, processed foods and it looks like they digest it, they don't get problems. Mm-hmm. What's up with those people?

**Hannah:** I don't know. I think they must have a pretty good gut microbiome.

And then maybe also, I don't know, genetics,

**Dave:** not, it's not fair. So I'm gonna change my genome and change my microbiome until I can eat a twine. Not that I want to eat a twine, I just want to know that I have that level of resilience.

**Hannah:** But you know, the other thing that I sometimes think is people have different thresholds for knowing what good feels like.

Oh

**Music:** yeah.

**Hannah:** And I think for some people, like, I think this was even true in part for me before I went through my whole Lyme journey and just became so much more aware of. My body. Um, I thought I was feeling good, but mm-hmm. Then you, until you unlock that next level of like truly energized, waking up feeling really good in the morning, you might think that that's just your baseline, but really that's not your baseline, it's just your baseline while you're eating gluten and processed food and junk food.

**Dave:** Fair point. A lot of people have no idea what they're capable of. 'cause they're just say, I always feel this way. I'm like, that's not how you're supposed to feel. I was one of those.

Mm-hmm.

You can actually feel peaceful, not angry. You can

Yeah.

Walk around with all the brain energy you want. Right. So I never had that when I was young.

Mm-hmm. Mm-hmm. Okay. Yeah.

What about alcohol? I am not a fan of alcohol. I think it's bad for you. Mm-hmm. And I'll drink it if it's older than me.

Mm-hmm.

Uh, which is basically a, a break. So like once a year maybe. Right. Um, and I know that I'm gonna feel crap the next day. What does alcohol do to gut bacteria?

**Hannah:** Yeah. So it's, it's a really interesting topic because you just in the last few weeks, really saw it kind of resurface in the media. And I think what I find most interesting is. Even my generation and younger generations are considering, you know, dry January or even stopping drinking alcohol at all.

**Music:** Mm-hmm.

**Hannah:** And I think it's because they understand more and more how it makes you feel. Um, when you look at your gut, specifically, alcohol can disrupt our gut microbiome is even in moderate quantities, it can change our bacteria, kill some of the good ones, increase inflammation. And I think especially that increasing inflammation, this is really where you start running into issues once you have inflammation in the gut.

Your, your gut barrier becomes compromised. Mm-hmm. You're essentially developing leaky gut and with that more toxins and unwanted things leak into your gut, uh, into your bloodstream. And you know, if you drink every now and then in moderation, I think your gut is more likely to be able to recover, especially if you're eating pretty well and not kind of adding more fuel to the fire through your lifestyle.

But the problem is when you just can't really get that inflammation under control, you have full on leaky gut. And then it's just this perpetuating cycle of low grade, low grade systemic inflammation, which we know has been implicated in so many chronic issues down the road.

**Dave:** I've seen some research is in mice.

Showing that if they put 3.5% alcohol in their water, so this is a pretty weak solution that they had. Lower insulin, lower fasting blood glucose, lower obesity, better metabolic function, a slight extension of life. Mm-hmm. And I'm thinking That's interesting. Yeah. But it's chronic, very low dose. Mm-hmm. So that would modulate gut bacteria via a hormetic stressor.

Mm-hmm.

Um, but I don't think doing a shot of vodka is, is gonna help.

Yeah.

In fact, before this I took some, uh, mushroom extract in alcohol.

Mm-hmm. And

I was sitting going, why does my gut feel weird? I'm like, oh, it was the alcohol. Right. So I, I just don't think it's good. Yeah. And the science is that it's not bacteria.

Yeah.

**Hannah:** And you know, one of the things though, I mean, I've had people, especially in January when they're contemplating dry January and things like that, I've heard people say, well. If I do want to enjoy the occasional glass of wine or whatever it might be, what can I do to support my health and my wellbeing?

And, you know, my typical answer is, one, electrolytes and just hydration, yes. While you're drinking, but also the next day. Mm-hmm. A good probiotic to counteract some of those impact effects. Ke talks, ke talks, ono ke talks, supports your gut and your liver. Um, and then also just making sure that at the same time you're maybe not fueling the fire also with bad food and, and other things.

Mm-hmm. So that's kind of my general advice. And then, you know, if there's any other supplements you can take to support your liver, like glutathione. Mm-hmm. Milk thistle, things like that, that's a, that's, you know, at least that way you can kind of, again, knowing the things that it does in your body, you can then help counteract those

**Dave:** really good advice.

I also published years ago this. Uh, alcohol roadmap infographic that's been, I, I think, copied lots of times and echoed throughout the internet. And the idea here is that if you're drinking wine or beer, there's a lot of fermentation metabolites that directly affect your gut bacteria mm-hmm. That your liver and kidneys have to filter out.

Yep. And if it's American wine, good god, there's 2000 chemicals that they can put in there that are not on the label that affect microbes.

**Music:** Yep.

**Dave:** So maybe you should step away from the wine and sorry for friends who own vineyards, don't put chemicals in there and announce it. And there are some types of wine.

Uh, like my friends at Dry Farms, they launched on the show many, many years ago. There's some that are tested to be free of additives. Mm-hmm. It still though, compared to a distilled beverage mm-hmm. Like a vodka or a whiskey or something, there's just less toxins that affect your gut bacteria. Yeah. So I'm like, do that.

Don't put a lot of weird chemicals and colorings in it, and then maybe take some charcoal, do the all things you said, take your he talk, take your glutathione and look, you'll probably be fine.

**Hannah:** Yeah.

**Dave:** Right. There's also Z biotic.

**Hannah:** Mm-hmm. Have

**Dave:** you come across those guys?

**Hannah:** Yeah, yeah. Yeah. I saw you mention them.

Um, that's a really interesting technology as well, obviously.

**Dave:** Yeah. Mm-hmm. And that's not something that you guys do. And they were on episode number 1000. It's only for some of you to take right before you drink. So if you do that before you drink to block one of the pathways called aldehyde mm-hmm. And then you take he detox, which is there to make your liver better able to process all these things.

**Music:** You're in, in pretty good shape. Probably could feel okay, right? Yeah, yeah.

**Dave:** Or you could just say, I saved a lot of money mm-hmm. By not drinking and I spent it on the steak instead. Exactly. That's what I do.

**Hannah:** That's my approach too. Yes. Okay. Right.

**Dave:** It's not that hard to do.

**Hannah:** Yeah.

**Dave:** Okay. What else can work if someone's dealing with acid reflux?

**Hannah:** Mm-hmm. Yeah. So, you know, that's actually a really exciting topic to me right now. Um, we just introduced two new products here in the us. They're already have been around in Europe for a few years. They're called Cico and Carriol gastro.

**Music:** Oh, cool.

**Hannah:** And, um, the Carriol gastro specifically is, is designed to help people with acid reflux and heartburn.

And what it does is it's a highly potent papaya concentrate. It comes also in a pouch. Mm-hmm. So it's a almost like a moose like applesauce. Okay. Um, it's prepared according to traditional Chinese medicine and Ayurvedic healing principles and the way it's prepared. It's a really long kind of cooking fermentation oxidative process.

It makes this papaya four times as potent as regular papaya puree. So potent

**Dave:** for like lining the gut? Yeah. Or potent for enzymes?

**Hannah:** It's actually the enzymes. Oh, wow. And the anti-inflammatory properties. Okay. And what they have seen in several, they've done several different clinical studies, but one cool study they actually did on pig stomachs in a lab, and they could see that this caral gastro solution coats, like physically coats the stomach, um, and protects it from, you know, if it's inflamed, it soothes and it coats.

And then they've also done a study on people with heartburn, and they've shown like a 50% reduction in heartburn incidents over the course of the experiment.

**Dave:** That sounds more powerful than aloe vera.

**Hannah:** Yeah, it's, it's a real, I mean, in Europe it's, people love it, especially people who don't wanna be on PPIs, who, and who don't wanna be on acid blockers and who still deal with this on, on, you know, a um, um, an occasional basis.

**Dave:** I don't really get acid reflux on a, a regular basis at all. Or, or say if I do, it's because I ate something I shouldn't eat. Mm-hmm. And I know why. Um, but I'm really interested in having the thickest, most ridiculous lining on my stomach ever so that I have less autoimmunity, which has been an issue for years.

Um, did you bring me some?

**Hannah:** Yeah, it's

**Dave:** So did you really? Yes,

**Hannah:** I did.

**Dave:** It's like, I wanna try this. Of course guys, I can't tell you whether that stuff works or not.

**Hannah:** Yeah.

**Dave:** Based on how all the other antibiotic stuff works. Um, I would say there's a high likelihood so, um, that's something to pay attention to. Yeah.

Um, I, I didn't know about this. This is super cool. You guys are always coming out with cool stuff and it's funny that it's coming out of Europe and you're bringing it to the US 'cause most companies. They're kind of wild west out here. Mm-hmm. And then maybe they try to move into Europe. Right. But in Europe, there's stronger standards for the science you have to do.

Yeah. So if it, if it originates in Europe and then we bring it to the us, there's a pretty good chance that it's, it's solidly built. Okay. Carriol is what that's called.

**Hannah:** Yeah. Carriol. Well car. So Carriol gastro is the one gastro for your stomach. Okay. And then the original Caracol, it's just the pure papaya puree that actually works really well for people with constipation.

So one of the big use cases in Europe at least, is elderly people because they suffer from this a lot. And women in pregnancy, because you know, especially when you're pregnant, you don't want to take harsh medications, but you still have some of these digestive issues. So this is a really natural alternative.

So

**Dave:** as, as a guy, I have a hard time understanding constipation because it feels like with enough MCT oil and magnesium, it should be impossible.

**Hannah:** That's, that's probably true. That is probably true. Um, it's just, uh, I don't know if maybe. Folks in their eighties and nineties who are dealing with this are aware of this as a good combination.

**Dave:** Anyone whose Constipator has ever tried that is going, Dave, you're a jerk. Right? Because that creates something called a depth charge. Mm. Because you'll build up enormous uncomfortable pressure behind the constipation and it won't come out, but you will not like the experience. Mm-hmm. So don't do that.

So a more gentler approach, like the caracol gastro that you're talking about, or even just taking more soluble fiber would be maybe a gentler way

**Hannah:** or maybe also just hydrating. Like I think, you know, many people just forget to drink water and electrolytes and stay hydrated. And that is, I mean, the number one thing is just your, your intestines also need the water to process your waste.

**Dave:** This is something really important. I only drink mineral water or water with salt or electrolytes in it. Mm-hmm. Only and. Um, when people do body work on me, um, they're like, you have the youngest tissues I've ever seen. I'm like, yeah, that's because that's a proxy for hydration.

Mm-hmm.

And it's made such a difference in my cognitive function, just my overall health.

There's also studies though, showing that eating more sodium has an effect on your gut bacteria. Mm.

**Hannah:** Do

**Dave:** you know anything about salt and electrolytes and gut bacteria?

**Hannah:** Um, not in depth, but you know, I think it's always, I'm, I would imagine it's how you're delivering the salt and the quality of the salt.

You know? Um, I mean salt is anything else we're putting into the body can be really clean and I'm sure it can also be contaminated. And, um, you know, just also making sure you have that right balance between sodium and the other electrolytes. And, you know, I would never mix my omni biotic in a bunch of salt water.

Um, you wanna make sure it's kind of not in that suit. It doesn't hit you in that really concentrated way.

**Dave:** That's the important point since. Antibiotics are gonna soak up whatever it's in. Mm-hmm. I put mine in RO water. Right. Right. And that means it's going to be fine. Mm-hmm. And then if I do have some mild salt water, the same as what's in my blood plasma mm-hmm.

As the goal for what I'm drinking, um, then it's not going to affect it. But if I added my electrolytes to the water and then I add my ono, it's gonna kill the antibiotic.

**Hannah:** Yeah. You don't wanna do that.

**Dave:** Okay. Mm-hmm.

**Hannah:** That,

**Dave:** that's an important point because I know a lot of people listening are doing what I'm talking about.

Right. With sodium or with balanced electrolytes. Things like element or like

**Hannah:** Yeah. I mean, same, you wouldn't wanna mix omni biotic in some sort of powder, magnesium, you know, same thing. 'cause it's just, it's just too much for these living bacteria. Right.

**Dave:** And that's not, I'm saying you can't mix with water, chug it, and then take your magnesium.

That's fine. Absolutely. It just has to be hydrated with Yes. With basic water. Exactly. That's a really important thing. Mm-hmm. If you had absolute 100% control of someone's microbiome, how long do you think you could extend human life?

**Hannah:** Ooh. Um, by quite a bit, I would think. Um, I think it's very scientific number.

I know, right? Um, I don't know. What do you think? 20 years? I'm

**Dave:** guessing 40%.

**Hannah:** 40%? Okay. Yeah.

**Dave:** And I. I, I, I mean, I can give my reasons for it. Mm-hmm. But give you your reasons first. Well, we'll,

**Hannah:** I mean, you know, we touched on it earlier. The gut microbiome is just implicated in so many different things. 70 to 80% of our immune system originate in the gut.

It supports our gut brain axis. It's, there's a gut liver axis. It's truly just, you know, and weve seen it see it in mice too, in the mice studies, germ free mice. They live just a fraction of the, the duration that mice with a good gut microbiome live. And you also see in research, a healthy gut microbiome correlates with overall health and longevity.

A dysbiotic, inflamed, disrupted gut microbiome is linked to so many different health conditions, including cardiovascular disease, neurodegenerative diseases, even cancer. So, you know, I think that that in itself, if you can cut out some of these chronic illnesses, which are one of the many of the leading causes of death here in the US and worldwide, then you can go a long way.

What's your reason? Oh,

**Dave:** we know, and I wrote about this in my longevity book, aging is death by a thousand cuts. Like there's no one cause of aging.

Mm-hmm.

Right. And most of those cuts are inflammatory.

Yeah.

And the number one cause of inflammation is immune activation.

Yeah.

Right. There's also mitochondrial dysfunction.

Mm-hmm. Which is also tied in with all these things. Yeah. Lipopolysaccharides, right. From bad gut bacteria mm-hmm. Across the gut barrier if it's not intact. Mm-hmm. And then they go in and they inhibit mitochondrial function. Right. So if we had a gut that never leaked mm-hmm. That only had good guys growing in it.

Mm-hmm. You'd have these manufacturing plants making all the beneficial postbiotics like oli a like sperm meine. Right. Um, like, um, butyrate,

butyrate,

butyrate, proponic acid. Right. A lot of these are supplements that I've talked about on the show mm-hmm. And written about, and probably a bunch of them we don't even understand yet.

Right. So you could control, you could also add some ones that make custom things, like there's a glutathione one and mm-hmm. So you could literally tailor the manufacturer of longevity molecules in the gut mm-hmm. And stop all the bad stuff. Right. Stop all the immune activation.

Mm-hmm.

Um, that has to be a lot of what we could do for aging.

40 percent's a guess. Yeah. But I think it's bigger than most of us believe. Mm-hmm. So, in the meantime, having a really healthy lining in the gut, I'm, I'm actually excited about your new product for that. And then having the appropriate mix of gut bacteria that make longevity compounds mm-hmm. With making fewer toxins.

Um, that seems like a good strategy, at least to support your health, which is a boring goal. Like, of course you wanna support your health, but I don't wanna support my health till 86. I don't wanna support my health till 180. Yeah. It just seems more interesting. Right. So,

**Hannah:** well, and I think you raise a good point there.

You know, people don't just wanna extend their lifespan. They want to do so while still feeling good. There's no use extending it by 20 years and then just lying on the couch those 20 years. Right. You wanna still be active and energetic and that, you know, you can certainly achieve by making sure you keep inflammation low on your body, keep your immune system functioning properly, keep your gut brain access working well, that's a pretty good foundation.

**Dave:** I I, I'd say, and it's an easier foundation than going out and taking the latest longevity drug or something. But I'll do both just in case.

**Hannah:** Yeah, same. Okay.

**Dave:** And I, I appreciate you coming on the show and I ask anytime, uh, someone representing a brand comes on, give a meaningful discount to audience. Mm-hmm.

So you've offered a 20% discount. Mm-hmm. Which is a pretty good chunk. That's omni biotic life.com/dave.

Yes.

And thank you for that. And if you're listening to this and you're saying, well, Dave's promoting something, yeah. I like to promote science and things that work and tools for longevity. And look, if your gut's fine and everything is great in that aspect, spend your money on something else.

Right. The odds of you having a high functioning gut, if you eat almost anything that you can buy at a restaurant are not that high. And I, like I said, I have three different boxes of the stuff downstairs. I know, I guess four. 'cause you brought me a new product. So I'm gonna talk about the things that work and the bio hacks that may be worth it for you.

I'm gonna talk about more of them than you're probably going to do because you are unique and you have your own goals, and you have your own current state. So maybe you took antibiotics and you're like, oh, this month I'm gonna do the AB 10, and maybe, you know, this isn't a priority. I'm working on something else in trial, then this isn't a thing for you, but you know how it works and you know what it is, and you can save some money.

I want you to go to omni Biotic life.com/dave and use it if it's good for you or you think it might be with my blessing. See you next time on the Human Upgrade Podcast.