Why Probiotics Stop Working (And What Actually Rebuilds Your Gut) Transcript

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Introduction to the microbiome and podcast

Everything you eat and every choice you make impacts this population. And we really focus on the gut microbiome because it's one of the larger driving forces because these microbiota really determine your cravings, they determine They're making the neurotransmitters.

They are synthesizing the vitamins your body needs. We are just covered with bugs, and I think we should just become one with that concept. Welcome to Take Back My Brain with Lori Hammer, where real healing starts in the brain.

I'm Lori, a functional nutritionist and mom who's walked the path from anxiety and burnout to clarity and calm. Each week, we're going to dive into brain-based tools like amino acid therapy, gut health, fasting and faith to help you reclaim your energy, emotions and sense of self.

All right, make sure that you stay tuned to the end of this conversation, because this is going to be a super interesting conversation. And I know you're going want to hear the whole thing and you want want share it with everyone because today I have with me Shana and she is a neuroscientist and works for NovelBiome where they focus on microbiome based therapies like fecal microbial transplant.

Yep, we're going to talk about poop today, and we are going talk the brain today and all of that is connected. So you're gonna want to hear this whole story.

I met Shana at a conference a few weeks ago and had the best conversation about the poop and the microbiome and everything. And so I just want come back and share it with all you.

Shaina, welcome to the podcast. Thank you for having me. I was like, I'm excited to chat too. So let's just start off maybe. defining what the microbiome is, and then what is a fecal microbial transplant?

Because I think people have heard of it. I don't know what it is. Is it really poop? Yeah, it it so. Yeah. So your microbiomes is similar to you can picture it like your fingerprint.

It's very determined by you, the factors of your environment, your development, all of the daily choices and diet really impact what that population looks like.

What the gut microbiome is and why it matters

But really, its bacteria and fungi and protozoa. and parasites and things living in your gut that are supposed to be there. And that can tip to being bad, which we call dysbiosis.

But the idea here is everything you eat and every choice you make impacts this population. We really focus on the gut microbiome. because it's one of the larger driving forces, because these microbiota really determine your cravings, they determine, your health, determine the sleep cycle, their making the neurotransmitters, there's synthesizing the vitamins your body needs.

They're doing all the healthy heavy lifting. There's theories about how like we are kind of just feeding a population. That's really what's driving everything we do.

And there are oral microbiomes, and there is vaginal microbiome, skin microbiomas. We are just covered with bugs. I think we should just become one with that concept.

and all of the choices we make in our environment impact them. The problem is if the method of which you were

born, the type of food you ate as an infant, if you are exposed to a lot of antibiotics, If you've been around mold or heavy metals or a lots of toxins throughout your life or having a really depleted diet, unfortunately what can happen is some of these bugs start to die.

And there's this balance, we call it there is a mixture of diversity and composition within the gut. These are the two main factors, so you'll often see it as like alpha, beta diversities.

So what kind of balance is in your gut? Unfortunately, when some of these die off, your got becomes dysbiotic. And in some cases, it's just a mix in the composition.

Some populations are a little bit lower than we want them to be, and you can recover that with some lifestyle choices. Unfortunately, sometimes the diversity really gets hit and you lose specific species.

Once they're gone, you can't get them back naturally. There's nothing left to feed to rebuild. And in some of those cases, that's where FMT, your fecal microbiota transplantation, comes in.

And the idea here is you're capturing a snapshot of a healthy microbiome from a health stool donor that's then processed down. So basically you are only pulling out the microbiota, the metabolites, some of the bile acids stay in there.

And then when that is taken and put into the gut, it actually can engraft or become part of that population. And I think we all know the stomach and the gut is not super-hospital.

It's really acidic and very basic, and it's the harshest environment of our body. And so what we're finding is synthetics like probiotics or postbiotics or even single-ingredient prebiotic, what they're doing is they are supporting the population that's already there, but they aren't replacing that population.

And so we're finding that you need the bacteria in these microbiota from a human to go in and actually be able to reintegrate within that tissue and that society that exists within your gut to repopulate it.

And synthetic versions don't work. So we are still stuck with this idea that we have to find a healthy person and pull out the instruction manual and then give it to somebody.

Then this allows their gut kind of reset. and then rebuild. And then that population, you can keep healthy with those healthy lifestyle choices and going forward.

The gut is so intertwined with so many things that we're really learning that the impacts of gut dysbiosis is way further spread than we've ever realized before.

If you haven't heard of the gut microbiome today, I would be very surprised because it is everywhere now. Even in specialties like neuroscience, which really doesn't focus on the rest of the body very much.

We can't even deny that the gut and the brain are really a pair that you have to appreciate both sides of that coin. Right. So in my hearing you say, so if somebody has done a stool test and they don't have any bifidobacteria, that we can take probiotics as is right now and repopulate that biffido, then it really has to be that fecal microbial transplantation.

Yeah, so when these keystone species, like Bifto, Lactobacillus, Echomancia, these kinds of ones that are when they're gone, unfortunately, probiotics, what they do is they kind of like fertilizer for your garden.

So if you have a plant that's drooping or isn't its best self, wouldn't put on the front of the table. If you put fertilizer on that, you take off some of load on a plant.

It's not fighting for nutrients. You give it the easy thing and it's able to bounce back. So if you have low amounts of something, a probiotic can come in and lighten the load so that natural population can repopulate itself.

When the seed is completely gone, you can put as much fertilizer on an empty pot and nothing is going to grow. Fair enough. So sometimes what we find, and we just recently saw this, so part of what do is we don't treat patients anymore as we try to make case studies for really interesting cases.

And we found the problem with stool tests, if you're taking a probiotic while you do the stool test, your stool will show you have that. because it's actively in your gut.

It's when you stop taking a probiotic within a couple, like a week or so, there's no trace of that. You can sometimes in a stool test seem like you have something.

And then if you do it again, a few weeks after you stopped taking the probiotics, it'll be completely gone.

How FMT works and why probiotics may not repopulate

So what it is, is probiotcs are transient. They're vacationers. They're in your body and then they just leave. They go through the system and out they go.

So they're not going to kind of stick in the gut. And so sometimes on a stool test, you know, we do this even where we're talking with doctors, he said, You really want to get rid of the probiotics before you do FMT, because the probiotics are sending a signal saying that something is there, but it's going leave as soon as you stop taking it.

Taking probiotic forever really isn't the solution. And so we want to keep them separate because we don't want there to be confusion within the grafting period that the body thinks it has something that's not gonna be there long term.

Oh, that makes sense. I was just thinking because, gosh, how many years ago was it? Maybe seven or eight years I did a stool test and sadly, I'm going to admit I haven't done one since because I've just been really working on my gut.

And that might be why things haven t changed, Shayna, because i had zero bifido. Like I said, no biffido, so I am always, you know, working on my gut, and then I don't take them for a while.

And, you know, things have definitely improved. I'm definitely healthier than I was in my gap prior to, but there's some things that just won't clear up.

So I honestly never knew that, Shayna. That's interesting. Yeah. When you're doing the fecal microbial transplantation, is it very specific to that individual or is just sort of like a one size fits all?

Yeah, so we're the sciences right now. it's kind of a one-size-fits-all. Okay. And the way that the transplant works, you know, I would say one day we will rebrand this.

There's so much science published, it is really hard to restart the name. But it mostly, like, kind like a therapy versus a transplant because what that is, we say you get donor-like.

So your gut is going to shift towards what the donor looks like but it will be different. Because what you're eating in the environment you are in is an impact what will engraft and so this is one of the reasons that the way fmc has been done has changed over time because what we're realizing is.

The change in diet and the change and lifestyle that comes with this has to be done in support of still doing the fmt so refining fnt. treatment and the research is getting longer and longer because they want people to have a solid diet integrated in because now the bacteria you're going to feed is going be stable.

And they will want you to change your sleep patterns and they'll want to bring back in physical activity before you stop taking the FMT. So basically it gives you a window where you can figure out how to make these changes while still supporting and making sure that populations that may be a little bit weaker are still kind of getting little top ups.

until you're ready to kind of, you know, take the training wheels off and go out into the world, because there's so much aligned in the gut. And so it's kind complicated in that we're solving one problem, but as that problem gets fixed, so say you are dealing with leaky gut, the tight junctions in your gut have become leakey, they're not hugging anymore, more high-fiving.

that's going to solve one problem. So what bacteria can live in an environment that is no longer leaky is going be different. That's one of the problems.

We've now fixed how the gut is functioning, but now the immune system is tied in. 70% of your immune systems is now tied into your gut. As that immune function starts to re-regulate, that will change what bacterium will survive there and thrive there.

Inflammation is going to come down. The brain is gonna start communicating better and the brain's going start asking for different things and that communication is then become two-way again.

And so we want all of those systems as well as the lifestyle to both shift and kind of settle into this healthier pattern and allow that bacteria to kind change and shift.

by being supported through all of that. So originally FMT was kind of like one dose, maybe two, call it a day. And as we're getting into really understanding more chronic diseases in terms of gut spaces, we are finding longer treatment windows because we've got more problems to solve and the gut has the biggest instruction manual for all those systems.

We're re-appreciating how important these little guys are in your gut. So is it different from a male to a female? So if it's a one size fits all, are males and females responding differently to this type of therapy?

Yeah, so far there hasn't been anything that shows that it's sex dependent. Okay. We are starting to see more research in like estrogen production in the gut.

That's where I was going. In terms of your metaphors and metaphores. So I think we're going to start seeing maybe that there'll be a trend towards wanting to pair if you're looking at like if your really estrogen is going be the issue or hormonal imbalance is gonna be what we are focusing on.

I could see that we may start looking more at female to female pairs. Similarly, male-to-male pairs, it may be the testosterone disfellows there in the androgens.

So I think that might come, but to be honest, I'm surprised to know that perimetaposy and menopausal research is becoming on the later side of things.

But we're getting to the point now we understand how the estrogenes, progesterones, testosterone, and endogens are all being produced in a gap. And I thing now that we have that part starting to figure out, we are going to start seeing, Can we rewind that issue by using younger female donors that have the instructions to still make these things and balances?

Can that help there? And so far really what has been done is looking at some of the infertility stuff as well as like bone density and fragility staff.

So like, you know, muscle structure and those kind of things. has been looked at, but the hormone stuff is very new. So I think soon, I will start to understand, does it matter?

Or is it just having all of the pieces and then you can kind of build what you need from there? That part hasn't been on a standard.

Donor screening, capsule processing, and safety

Sex hasn' t been an issue. But I th nk we might see that shift as we look more into more to like female dominant conditions, like where females tend to have the kind to be the only ones dealing with that issue Yeah, that's super interesting.

So how do you determine your donors for this therapy? Hey friend, just a quick break to remind you if calming your brain is the missing piece in your practice or in home, my MindThrive certification course teaches you exactly how to do that with targeted amino acid therapy.

It's real science, real results, no band-aids. Enrollment is now open. Link is in the show notes. Back to the Show. So it's about 1% of people who apply.

And so the way this is, it is very frank, like, are you healthy? Do you fit these general criteria? 1 percent of the people that apply based on those broad characteristics make it through our initial health and wellness and family's training.

So we're looking at being vaginally born in breast feds. That's kind of like the beginning of your microbiome. They have to have less than five courses of antibiotics in their lifetime, and they can't have had any in the last year.

Well, I cannot be a donor to you. Yeah. And I always say, like, that's a small population. We go further because we're looking at, you know, kind of had vaccines in last 12 months because the shedding and the gut.

So we always see If you're dealing with an immunocompromised patient, we really want to make sure we're not going to transfer anything. So that's part of it.

No tattoos. You can't work in a hospital setting because you can be exposed to blood. And then we look at family health conditions, so they and their direct family, no autoimmune conditions.

no medical conditions no cancers no GI conditions No neurodevelopmental, neurodegenerative diseases, anxiety, depression and sleep issues. So actually five people?

Yes, but like 1%. And we do, our donors are between the ages of 10 and 30. And so we're kind of on that. They haven't lived as much life. Um, and that's part of it because we, we know the gut ages.

So we want to stay on the right side of that aging. I think partly it's location. We're about two hours outside of Vancouver, British Columbia and Canada.

It's a small area and it tends to be family. Like we have a lot of families, so like all the kids in the family will be donating. And then on top of that, they do blood stool and urine screening to make sure there's nothing pathogenic and general health markers.

And from there, we get our donor pool, and then they're re-screened every 90 days to ensure that there hasn't been any changes and they haven't come across anything.

Because sometimes healthy people are carriers for stuff, and it doesn't impact them. And so you could have you can have a multi drug resistant organism in your body.

So type of bacteria that you know, is very against doesn' respond to antibiotics. You could be a carrier for that never impact you ever in yo life. But if you gave that to somebody else, they could hav a really negative reaction.

An so even people that all the way through a healthy could be a carrier for something. And so it's something where it, I always say we keep our donor pool small and happy so that we can kind of really monitor out because it it is the biggest safety factor that exists.

Wow. That's fascinating. So here's the big question. Is it really poop in a capsule or what is it? Yeah. When you look at it, enemas are kind of the least processed.

They're filtered the lees so you get more of The capsules are further filtered and so part of this is filtration and then we use centrifuges to spin at different amounts which will pull out different populations depending on the speed.

And then, we have an oral powder which you just mix with water and that is our most purified. So, literally the oral power is a white tasteless odorless.

powder. But part of this, I think, is there's so little in there that you need. You're basically just filtering out everything that You don't want. And so it doesn't have a smell.

We freeze dry everything into a powder part. Of this is bacteria when they're around water or act. So I freeze dried, they go into stasis. They go to sleep.

And then when they come in contact with some kind of moisture, they can come back alive. So it's, I think, harder to envision. And we found now that we try to, like, have more visuals or try show people because it, it is, think a mental leap to be like okay, so this is not what I thought it was.

But there's a lot of cool science around getting out what we need. It kind at the end of capsules look just like a standard probiotic. kind of cool. We still use clear castles so you can see what it looks like, but one day maybe we'll switch to white.

Maybe people would prefer that. But we like that you're like this is actually what is looks, like no fear, it's all good. Right. And so does it really make it through like the stomach acid and all of that?

Yeah. So the, um, our capsules are double enterocoded. Okay. What this is, and part of when we release all the robotic, we test it in gastric and intestinal fluids to know how long it will last in those situations.

We pick the harshest kind of conditions. Like as acidic as gastroc acid will go, because then we can know when about it should open and we always test that before we released.

There's a lot of. We're a GMP manufacturer, good manufacturing practices, so there's a lot of standardization to everything we do. So, you know, two years ago what we made and what made today will have all the same standards because that's kind of the set goal.

Yeah. Wow. That's amazing. What kind conditions are you using this therapy for? Yeah, we don't treat patients. We work just directly with medical professionals.

But the research is exploding. So where most of the researchers have been done to date is with C. difficile infections. And these are tend to be hospital based infections, it's still I think in the US kills about 30,000 people a year.

But, the efficacy of FMT in that case is around 98%. So we're hoping, I think, that over time, we'll see this be used as a first-line therapy. Right now, it's not.

But outside of that, We're seeing it like in autoimmune diseases like lupus and MS, as well as rheumatoid arthritis, so kind of the three biggest auto-immune areas.

Neurologically, autism and ADHD, Autism has more support right now. but I Think we are starting to learn about kind of resetting in the neurodevelopmental environment is really important, but also like anxiety, depression, bipolar disorder, as well as Alzheimer's disease and Parkinson's and the neurology spaces.

The results are amazing and research is building from that. And then of course there's metabolic conditions and even type 1 diabetes has been supportive in that aswell.

So it's exploding. I think I find more that we're looking at it in more conditions. per day than less because I think what we're understanding is it may not be always a cure.

It may be that this system is a driver or a big proponent to why that disease progressed. Right. And can we slow it by fixing that problem or can stop it, by kind of recalculating what the gut is telling the rest of the body?

But in diseases where the immune system, is real big driver, the problem is, once the system loses this is what it's supposed to be doing and becomes more reactive or reacting incorrectly.

How do we reset that?

Conditions treated with FMT and gut-brain signaling

Our approach right now is often to try to turn it down as far as we can versus re-educate it. I think that's the difference when we're looking at The gut factor of this is how do we re-educate the gut so it can tell all of the other systems what they're supposed to be doing versus try to stop the systems from acting?

Because that doesn't really fix the problem. It just basically like, you know, it's like being in a lab room and covering your ears. The room is still loud.

You just don't hear it as much versus explaining to yourself, how to I turn down this sound? myself, how do I fix my environmental issue so that I'm not just trying to cope through it?

And I think that's part of the way that at least I view how this works is it's, okay, let's tell this system what it supposed to do so then it can tell all the other systems it talks to daily what their role is in their relationship versus trying get all those systems to just turn off.

That doesn't really fix, you know, what caused this problem. Right, sounds like it would make things a little more simple. As we as practitioners are doing protocols and stuff, you know, we're always working on the microbiome and healing the gut and changing the diet and all those things.

But as you were saying in the beginning, if you don't have this bacteria, me as a practitioner misnomer, I thought we could, add in probiotics and we can repopulate things to be honest with you.

So I had not learned that. Yeah, and I think in some cases, some patients will respond beautifully with probiotic or postbiotic. And that's probably because it's more of a misbalance in how much of each thing they have versus it being missing.

And I think the way that we've understood probiotics for a long time, it was like it is the strength that you were missing and this is what you need and the learning that it doesn't engraft, but as well that there's some reason that a singular strain doesn' engrave.

So by pulling out a couple of the things we know are important, maybe we haven't categorized it all, but we're so focused on the bacteria, which is the largest population within, in the microbiome.

But it's interacting with the other microbiota and there's metabolites in there and how, you know, I think that balance of all of it being there allows it to actually integrate and stay where probiotics, they're, there just, They just haven' t cracked that code.

And I th nk there' s research happening. Can we make this synthetically? for many reasons, but if we could pick the perfect microbiome and just make it over and over again.

But the problem is A, we don't know how to know what a perfect donor recipient matches yet? And that's, I think, something that, you know, we want to better understand, but I guess as a whole the research needs to understand.

Is there something, that you, know we talked about, does sex play a role there? Does age play role? There does different nationalities play roles? You know could you take someone from, the UK and give it to the US and that be the better?

Is that the right match? That part we don't understand yet. So we go with as healthy as we can because we know that the recipient plays a role in what will engraft, but we need to understand that better.

And then we to fully categorize it. In these large-scale studies where they're trying to say, this is what microbiome is, I love this, because they go wider and wider, and they look further and further, really it's so independent by the person.

You play such a big role and what it will look like. from like, I really believe in this, you know, the concept of alternative medicine, how else do we look at this problem?

And can we solve it looking from a different perspective? I like that our body is so powerful. It can do so much. I think we forget that sometimes you want external things to fix the internal problem.

But the gut is such an interesting thing is like you can shift your gut with your diet in 24 to 48 hours. Like what else can you do for your health that you like in the next day be like I did something I made a good choice today and I know my body is better for it.

And I love the exercise depth science because it's like just like mild aerobic exercise will make huge impacts. And so this is so much more, I think, easier to approach.

Like if you take the stairs twice today when you never did, you actively made a choice that made your get healthier. And every day you can build on that, but it doesn't have to be this huge kind of, you know, we need to make you have make this a huge change to see any impact.

I think that's so beautiful about the gap because it's. So integrated and it can really improve your mood and they can't really prove your health. But you today can make a small change in each one of those small changes builds towards a really big shift, even in the sleep staff and working on a shifted schedule causes a lot of health issues.

And we know that. But from a sleep perspective, when people go, I just don't know how, how do I fix sleep? I always say that I hate it in female research when you're talking, they go just be less stressed.

Like if, if I could wake up today and be left stressed, i'd be never be stressed again. But how did you do that? Right. So it's like, How do we pick things you can actually do?

So I say with sleep, it sleep when it is dark outside, When it starts to be sleeping. Yeah. And that's, that the beginning of a healthy sleep cycle is going stark outside.

I should be in bed now. shifts how your hormones or sleep-based hormones will react because you can retrain those based on your habits towards it is dark that in sleeping but then your body will start with okay so it's dark out where you want to be sleepy and it will Start doing that and that that plays a huge role in your sleep cycles both in in making them better, but negative ones can really impact the health of the gap.

I think that's fantastic that these small changes can make measurable differences in the gaps. From a neuroscience perspective, like, I think we've lost the plot a little bit on how to make habits.

I don't know how many things I read now that if you do something for three weeks, you'll do it for the rest of your life. It's like no, three week is your highest drop off point.

Right. But it's not when you make a habit. Habits don' happen till like three months in of doing something. Will it be a habbit that you will actively just do?

So, it is, if you keep going after three weeks, you are more consistent, but you have not yet made a habit where you will just automatically do it. And so, I think we've tricked people into believing, like, If you can do over three, so you'll do forever.

No, It's just if can make it past three week, they're less likely to stop doing it, But it's not a yet a have it and so that's huge to commit to do something every, consistently for three months.

That's a big life shift. when life is so busy and there's so many things and another thing to do. So sometimes it's like, could you imagine if you today changed your diet and added a fiber, tomorrow your gut will be better than it was yesterday.

I, for me, and maybe I just, I have a short attention span these days, but I'm like I like that because tomorrow I'll just do two better things for my gut.

Because like I already saw a change. I know that it is better and you'll consistently see that so quickly. But it's I think that quick reward and even how we approach diet has shifted because it giving someone how much of something they have to reach.

You need 25 grams of fiber. There's a lot of math that goes into that. And you've got to figure out what's in what. So the most important part of diet is diversity.

How do you make a diverse diet? And then I'm like, what is the easiest way to get people on board with this? Gamify it. Start with getting to 10 foods.

Most people right now have about 10 different foods they eat a week. which is not great. It's not good for you. But some of us live in Iowa and our food options are more challenging.

Yeah, but it's figuring out like how do we do that? How many different types of greens can you find? Right, herbs, spices. Herbs, Spices. Those things add diversity to your diet.

Sometimes you have to become a little bit of a magician in these cases, but it's how do I build from my 10 current to 15? Okay, now I have 15. How many can I put in a salad?

Because you can make a solid that has 10 different things in it. So thinking not about how much of each ingredient am I hitting, But more about, how many different thing am i exposing my gut to?

And then thinking, the more you expose it to, The more your feeding.

Gut health, habits, sleep, and diet diversity

And so, you're an active participant in the health of your gut because you are choosing what you will eat. And the more things that you eat, the cravings you'll hit towards those healthier foods, right?

Because those bacteria will become the loudest. So you have to think about this. If you crave a lot of sugars, it's probably because your fed those bacterias more and they are loud.

They love, they want, and will ask. And so trying to feed the other ones to give them a little bit of a bigger voice so that you're kind of driven towards these different kinds of balances is kind cool.

Yeah, that's so great. And it's just education, just teaching people how to eat in a diverse way and seasonally. I mean, you know, we're not meant to a whole bunch of berries in January, but how many of us like berries and January?

I'm one of those people. thinking outside of the box for sure when it comes to our microbiome. We're so just shove it in and move on, shove in, and we're damaging our gut and then we wonder why we are sick and have to fix it.

I'm glad this therapy is available. You mentioned parasites in the beginning as part of microbiomes and stuff and there is so much talk around parasites right now and everybody is teaching and doing all of these parasite cleanses.

Yeah, I think there are ones that aren't supposed to be there and that will impact the health of the gut. There are one that are supposed be their and then some of these protozoan parasites are only present in people with really healthy guts.

Right. We as a group, as humans, want simple solutions for complex problems. And so we know that some parasites are bad, so they get rid of all parasites.

I believe this truly like symptoms and situation play a role together. So you can have an extremely healthy gut and have protozoan parasites in there that wouldn't exist in someone that is unhealthy, but would be damaging for a different person.

Right? So what you've experienced and how your body responds, but if you are having a negative reaction, you're having lot of loose stools, or you really finding that you have to remove foods after traveling or something, that's probably an indicator something isn't where you need it to be.

But I think wanting to kill off everything before we know what it is can be damaging in its own right. we like all or nothing because we are very black and black-and-white creatures and so I think we need to better understand the full picture and to be honest like we don't really know why they're there like why are some fungi good and some fun guy bad why is a little bit of you know yeast good but too much yeast bad And what's the threshold for that?

That part's not known yet. We know when it's an overgrowth. But like, I always say it was like over growth is bad, but a little bit is good. And What's in between?

Like, what are we looking for? What shifting it? And so we're still kind of learning all of this. So I think it is very more like let's figure out what the whole story tells us versus one piece we've decided is the worst one.

Similarly, with bacteria, we've picked a handful of bacteria we think are the best bacteria. We haven't even categorized all the bacteria that lives in the gut.

And I always wonder, is it partially because these ones are something we can culture, so they're easier to test in a controlled environment, or are they the drivers?

Because you very rarely find someone that has three really great bacteria are super high and then none of the others, and that they are fine, because it's not just certain strains.

So I think we don't know the whole picture yet. And so I thing we still have to figure out with using both, you know, testing and, and what kind of balance exists, but as well as what symptoms are telling us, because I mean, even for us more screening donors, we have donors that are extremely healthy, their gut looks amazing.

But they have a protozoa that's indicative of them having an extremely health gap. They can't be a donor because in someone that is immunocompromised, that could overgrow.

It's such a weird You know, we don't know enough of the story, but we do know what the in different situations that can be negative. And we hear a lot about like, why don' you go to like remote?

you know, areas where people that aren't integrated into large societies and they're still living off the earth, they would be the best microbiome donors, right?

And we always say, no, their microbiomes will probably kill you because they've experienced things, Their body is completely set up differently, how they are processing foods, the types of foods the environment that they in, what parasites and protozoa and stuff are existing in their gut.

We couldn't handle. There's a mismatch there. And so there's some parts of it too about like, you know, there is a balance existing within the environment you're in.

But I think we're not far enough in yet to say that all, to be all or nothing. All parasites are bad and so we should get rid of all of them because I don't know if we know the impact of what removing the ones you need there are.

What story are they telling or who are the supporting in that kind of population? Well, that's where I get concerned because there's a lot of people that tell me, oh, I've been on ivermectin for the last five years every single day.

That's just really, a huge impact on your gut. Great. You haven't gotten a viral infection for a while and that not always a good thing either. Your body is going to go in cycles and I just don't think it's smart to stay on something like that.

None of them were made to be used forever. Even were tested or made used for that long. But they aren't doing that there's something going on. And I think we've come to a point, I don't know, nobody wants to There's programming that's involved in being sick.

Your body is learning. Kids should be sick, they shouldn't be all the time, but they need to because without that, their immune system doesn't learn the instructions of like, oh, this is a good one, and this a bad one.

We do this. This is what a fever looks like. All of these things are part of our programming. You know, we talk a lot with like high performance. They go, I'm never sick!

never sick, haven't been sick in years. And I said, you must be very stressed. Why is it? Because when your court is higher, your immune system is like, we got a battle.

We can't be sick right now. So your means system turns down when you court goes up, this stress hormone. If you took five, 10 days off right Would you get sick?

Last time you took a long vacation that you completely relaxed, did you gets sick?" And most people in those situations go, yeah. And you go yeah, because your stress level went down, so your immune system turned back on.

Your immune systems like, I have things to say. I have been off for a bit. Right. Yeah. And so I think it's important for people to like really understand that it is a balance.

Our whole body is about the fact that we get up every day. It's a miracle all on its own. Um, and so, I, think, it, s like understanding that when one system stops responding, that's not a good sign.

It's supposed to be there. If we didn't need it, we'd be getting rid of it. That's how evolution exists, right? So like our body is changing over time to integrate to the new space that we're in.

And so nothing should ever be off. I never really thought, and now further into understanding the gut, I've never thought about why the got would be so important.

and how it was so connected. And we argue a lot about like direct connections and is there a certain pathway to think. But then you go, well, blood is everywhere.

oxygen gets everywhere, the nutrients that you eat that get processed, they go everywhere. And so I think it's less about how each system is and realizing that everything is kind of, you're just a squishy body with stuff going around inside you.

So everything gets connected and it makes sense. When you start hearing about the gut, if you have skin issues, it is probably a good indication that right?

Because those are reflective of each other. And then if you go from a neurodevelopmental perspective or developmental perspective, the cells that make the skin are very similar to the Similarly, the tight junctions that make up the gut are very similar to the type junctions of the blood-brain barrier.

And that makes sense when you think about it. We all come from a handful of cells that just get told what to do.

Parasites, immune balance, and overuse of treatments

So when we start thinking about why these things impact each other, we can go back to beginning and really look at, okay, so these cell types are similar.

It would be if one is reactive, it's possible the other one is showing something similar because they're kind of the same thing. And so really understanding what parts of a body are connected based on how they were developed and understand that they could be reflective of each other or could the things that impact one could impact the other and I think thinking of it that way in terms of why are these things connected or how, maybe we can go back to like, what, like where did that connection exist from a cell type or, how a structure was built?

And then how did they start talking, I think is a cool way to view it as well. That is really cool. Speaking of talking. Let's go, let's dive into like our last little section here on neuroscience and how do our thoughts and what we speak affect our microbiome?

Yeah. it's hard to go to separate them. I think thinking of how big of a role the gut plays in how our brain feels is really important. So like for a long time, we started to understand that the brain could talk to each other and that it was a two-way communication.

One can ask for something, one can provide it, and one could tell somebody that like, hey, something's happening, I need you to react. They go back and forth.

And then we started getting into how is the brain getting what it needs from the gut? Can the good even make these things? And from a neuroscience perspective, we really like to think of the brand as a separate unit.

The brain can make everything it means, and it could live without the rest of body. It's completely fine. And now we start realizing, well, neurotransmitters can be made in the guy.

And then we start looking at the percentages. So like one of the happiness hormones to give it, you know, to belittle a little bit of everything it does.

But serotonin is a big driver. Yes. most of the serotonin your body makes is made in your gut, which to me, looking back like SSRIs, like why there's so many GI symptoms now makes a lot more sense.

Because we thought that the brain was making seratonin, that brain the driver of serotonin when SSRIS were made, because we didn't know. And so now we know, so that a lotta that is driven that way.

Then you can think about food playing a role in mood, makes a lot more sense why when you're in a certain mood the types of food you crave and how that can become cyclical.

So you eat bad food because you feel bad and then you craved bad foods which makes you And then that becomes a cycle. But then, that type of food, what is it making?

It's not driving the right thing. So then you're that continuous cycle, right? So you are shifting what neurotransmitters are being made. And we've always talked about serotonin, but in the last couple of years, like dopamine, which is, you know, big motivational, I think plays a role in that kind of, having stability, also made them a gut.

Neuroaponephrine, GABA, like more of them are, we're realizing are being made in the gut, which may be, I think, you know, a good signaling or it's passed up to the brain and then allows the bring to make more a bit duplicated out.

But I. Think we need to understand that what we are putting in our body is a big determinant of how our brain can

function. One of the big indicators that you have, that there's got microbiome issues from a neurologist, brain fog.

You're thinking through cement. That's because your brain's not communicating the way it needs to because it's probably not being given the right materials to function.

So it is really hard to separate those out because I would never want to say that the gut determines brain health because the brain is a magical, beautiful creature and does all these wonderful things.

But I think how we view the brain's ability to be its best, its ability, to function at its finest, can't exclude how they treat our gut because it's what's feeding the pain.

And so I that's a big thing and even from a developmental perspective. And I keep going back to that because that's where a lot of my original work was in like how our brain develops from birth till death, like, how does the brain change?

And understanding that the gut develops first. So it's one of the first organs to become adult-like. Three to five years of age, you have what your adult gut is going to look like.

The general setup exists. Nothing else is online fully at that point, right? We're just, we're, just figuring it out. We just storing memories really.

So it's like we are just sitting there. but that is going to trigger the immune system to turn on. So if the gut doesn't hit that milestone, now your immune systems not gonna start and start building the way that it's supposed to.

That gut-brain connection, the brain is developing after the gap because the guy is sending out the instructions for, okay, this is what we need now. This is where we're building.

I'm gonna to start what you need and you're gonna use it. And so from a beginning standpoint, really understanding like, this this first system is communicating with all of the other ones and then when we look at neurodevelopmental diseases like autism, we know the gut isn't developing at the right rate.

So it stays underdeveloped comparatively to neurotypical peers. Okay, so then how does that then impact the immune? We know there's immune dysfunction in autism as well.

As well as the key kind of features or critical periods within the brain aren't hitting the way they're supposed to. Because it wasn't given the instructions or it's getting those instructions at Right.

And so now it's like you can't separate brain from gut because from the beginning they've been connected and they're talking to each other and pushing each to hit these right windows at the right time all the way through because we say the biggest changes in your whole system are at birth and at death.

That's when all of the exciting stuff happens. Right. And so, but we see before those, you know, the deterioration within the brain, we'd see deteriorations within that gut.

Just naturally, your gut just, that's one of the wheels that falls off the wagon on the early end. But then you can take that and go, okay, so in Parkinson's disease, 10 years before people show Parkinson symptoms, 80% of them have the same GI issues.

Oh yeah. But this is a neurodegenerative disease. So is the degeneration starting early? Is it getting the wrong instructions? Are the instructions coming too early and that's triggering some of this kind of dismantling, right?

can we think about it in terms of this two-way communication, but both good and bad?

Neuroscience, neurotransmitters, and the gut-brain axis

I think we like the two way communication when it's like, I want to be happier, so my gut's going to make more serotonin and everything will be wonderful.

But the other way can be true is it can ask for not enough, and then the gut stops making as much because it is not being asked for it, right? It's hard to take them apart and like we're rethinking a lot of neurological diseases because we can't think about them in isolation.

And so how do we redefine? How do figure out this is how we categorize this disease, but that's only in the brain. Is another system doing something before that?

Is this the end game, not the beginning of the disease? And then can we start being preventative? versus reactive. And for neurological diseases, most of them, you're very reactive, aren't really preventative.

Most of it's because we don't understand them yet. We're rethinking how we viewed all of the them. But the other side is that that's the way we only treat things when we know what to call it.

So I think we need to redefine what the disease is so we can start calling it by name earlier and dealing with the initial symptoms before we're dealing much harder for the dominoes, too many of the dominos have fallen to bring them back.

You can maybe stop them from falling, but the damage that's been done is done. So I think we're getting this space and I picture a world where at least we understand maybe what the first symptoms we should look for are across the board.

And I even the fact that we are talking about gut health at the level we and everybody's getting to understand the role they play in gut health, I think is the beginning of viewing it from a preventative standpoint because it's like, okay, so this system is playing widespread.

We need to really understand it and how do we keep it healthy? How do keep that protected? And so we're kind of playing in two fields where like in chronic diseases, like does the gut play a role and what does solving the issue do?

But on the other side is how do we keep guts healthier? How do re-work, how we view diet, How we better incorporate exercise in day to day life so more people can do it so that we're preventing what dysbiosis and those impacts turn into chronic disease.

So, so true. So when I'm working, you know, with clients, I am doing the amino acid therapy first. And so we're feeding those neurotransmitters. Most people think they're in the brain, but, we know we are feeding them in a gut with those amino acids too.

You're getting that inner sunshine back, right? You are getting the happiness back. The joy back is helping with cravings. Then I find people can change their diet and then we can really work on their gut once we give them that initial win and they are happier, healthier mentally and stuff.

I see a huge a huge shift for people when I'm doing it that way. But we can't forget the gut. People are like, but Lori, what about the gap? Well, yeah, we're working on the guy because we were starting with the neurotransmitters, which are here and down here.

So we have to address both of them at the same time. And I love what you're saying about all this. I can wait to start using your product with some of my clients.

If my client's are listening and you want to try this, send me a message and say, hey, Lori I want try to see how this affects me as well. Any final thoughts on everything?

Yeah, I think you made a good point on, you know, when you're targeting the issue first, like, let's get you to a point

where your brain is clear and you can make these decisions.

You know if your house is on fire, You're not going to worry about how dirty your kitchen is. Definitely not. Right. And I think sometimes we need to think about that.

Like, sometimes you need get to a space where you can make the next best choice before starting at, and I feel like sometimes this gets very like, you know, I need change my day, need exercise better, to sleep better.

I needed to be less stressed. So I do self-care. It's just like, how do I do all of these things? I'm barely doing the thing now. And so sometimes it's like can I get to a space where that it smoke not fire?

Can I get to a point where I'm clear headed and I don't feel like everything is a mountain? Everything is the hill. Like I can climb a hill, I cannot climb the mountain.

And then making those small choices to sustain that long term is so key. I want people to understand that like the small choice is matter and you do not need to change everything at once.

Because honestly, if you change it once, you are not going to stick with it. make small choices that are livable today. And then when that one becomes easily livability, make the next one that is livabl versus trying to do it all at once.

How many people get a gym membership and go to the gym for like four days and then feel terrible because everything hurts and they never go back to gym.

Okay, well, like, would you have stuck with it if you walked, went for a walk, and did that every day and then made the net? You know, so it's like don't belittle the small choices that you're able to make today because each of those builds towards, you know fixing your gut, fixing, your health.

And I think we focus too much on the big things and not enough on, the little things you can actually do and I Probably more important because they're long lasting versus trying to change everything at once and making it 2.5 weeks.

Yes. And then, you know, and then kind of falling off the wagon cause and re-appreciating how long it takes to make it happen. Don't feel bad because it's still hard at three weeks cause it supposed to still be hard of three week.

I feel like a lot of people give out at that magical new number they've created. Um, I think it was easier to sell a 21 day program than anything else, but.

Yeah, I digress. But it's that spark. That's the start. And if you can do it for 21 days, it will be easier to do up for 30. but thinking it supposed to be easy at 21 isn't fair because it really does take longer than that to make of it.

Um, and I think that, that framing, has been hurtful to people, even myself. I'm like, should be good at this point. Oh, right. No, It's going to take me much longer to like master this, but that's another important, shift.

and i think we all need that all the time. I need someone to sit on my shoulder and be like, just view it from over here. It's way better this direction than it is this side.

And so I think we just need to kind of give our brains a break and look at it upside down. My daughter always says any time she like does something silly, she's like sorry, my brain was upside-down.

Oh, cute. and it's such an interesting view, but she literally is trying to explain that she didn't really think about it, in her head. You know what, sometimes, you know, if my bring was just upside, down when I did that.

Yeah, give your brain 90 days to flip around on each of those little things. I'm always telling my clients, we have to

do this in 90 day increments. Yeah.

We have too. Don't commit to 30 days. Let's do it for 90, but let's commit today, today. And then let go, you know, The next 89 days and let's go the next 88 days.

And let just take it one day at a time. Let's walk to the mailbox. As my friend Liz Graves says, she goes, I tell my clients she does a lot of metabolic health.

She's like, walk through the mail box, get your shoes on, walked to mailbox and you're out to mail. Like, oh, i'm already dressed. I might as well go around the block.

I have enough energy to go around two blocks. You just keep incrementally working on things and just, keep that 90 day goal in mind, but don't make that the forefront of everything that you're doing.

Just get it done today. That's what it is with brain health and gut health.

Practical takeaways and closing remarks

Take your gut therapy today, take your amino acids today and let's see how you feel and then we'll tweak things if we need to tomorrow, just keeps going.

Yeah. And it's supposed to be hard. Yeah, it is. Just keep going and it'll become easier. People say, Laurie, I can't do what you do. I've been doing this for 35 years.

working on my health and doing all the things I do. So, no, you're not going to do what I did tomorrow, but you are going keep working it and you will eventually get to a place where you like, this feels really, really good.

Yeah, because it's a habit. Because you did the 90 days. Exactly. It's all going around in a circle. Yes, it all goes around on a cycle. And it is so good, I love this conversation, Shayna.

Thank you so much for being with us today. Thanks for having me. I think if you've got questions you can always reach out on our website. Even if it just like I want to know more about this.

We're a bunch of nerds. And, you know, I feel like we're not always likely to add better questions. So like, where to find information is even sometimes difficult or getting the right information.

If this is, something you think I wonder, or I don't really understand how this connected, ask. Sometimes the answer, it feels bad. But sometimes, we don' know.

That's okay. I'm becoming one with that. That's my scientist brain is being like, I don't know, but I'd like to know. And I wonder if I could know that it's good to ask these things because it could be, it, could it be a big factor or sometimes you don t even know what impacts it s having on your health.

So sometimes it is interesting to like is this even connected to the gut? That s a good question. A good starting point to understand what choices you can make to make it a little bit better.

Yeah, I love it. Awesome. All right, so if you were listening and you're thinking I want to understand all of this at a deeper level, make sure that you tune into all the other episodes that we have and watch the back episodes as well.

Just so all we know, training program for anyone who's a practitioner or a passionate mama out there. It's called MindTribe, where we actually use those amino acids that Shayna and I were just talking about as foundational strategies to restore that brain and how to restore your gut.

So we keep it simple, practical, and a lot of fun. If you're interested in that, make sure you check the show notes or

send me a message. Shaynna, thank you for being here.

We love you. Thank you so much. All right. Love each and every one of you. God bless. See you in the next episode. Thanks for listening to Take Back My Brain.

If today's episode helped you connect with hope or direction, I want you to follow the show, leave us a review and share it with someone who needs it.

And if you're ready to start your own healing journey, explore our courses and our coaching programs at lorihammer.com backslash store. So until next time, remember you cannot medicate away a nutrient deficiency and healing your brain isn't just possible, it's powerful.