Introduction and Doctor Plantu2019s Background

Greetings. I am Doctor Jamie Kunkle. I am joined here by Doctor Brian Plant. We're going to be talking about the gut today, but, first I'd like to introduce Doctor Plant a little bit, who's a colleague and friend of mine.

I've actually worked with him extensively at, our shared prior practice in the Sacramento area. Doctor Brian Plant is a licensed natural plastic doctor.

He has extensive training in integrative, health care approaches. He specializes in working with patients suffering from complex immune dysfunction, such as, Lyme disease, chronic infections, viral infections, environmental toxicities including mold, metals, autoimmune disorders, mast cell activation, chronic fatigue.

He, helps patients recover from, functional gastrointestinal conditions, such as what we're going to be talking about today. Adrenal and thyroid disorders.

Neuropsychiatric disorders as well. Yeah. And, he conducts a comprehensive evaluation in order to get a complete picture. And, creates individualized treatment plans to address the patient's specific concerns.

He's a graduate of, National University, of natural medicine in Portland, Oregon. Great school. And, he's an active member of islets, fellow islets member, which is really cool as well.

We'll just dive right in, though, here, I think, we'll talk more about plant as we go get a good, good sense of who he is. He's, really very, smart, very sharp individual here with, chronic diseases.

He has the mind for it, for sure. We, as we know, this can be difficult. So we're going to talk about mold, and we're going to talk about the gut. The, the central, you know, place of our, you know, is sometimes not always.

You know, it's nice when somebody comes in with out a gut issue, but, it comes up. Let's just say that. So, please, let's just dive right in here. Doctor plant, if you're cool with it, explain the mechanisms of, toxin removal from the body.

Tell me about this. Concept of a trees who, like, how do people get these toxins out of their body? And then we'll we'll get into the gut. Specifically.

Yeah, that's a great question. First of all, it's a pleasure to be here. It. Doctor, doctor Kunkel has been an exceptional, part of my training and and work and with these conditions.

And so I just want to acknowledge that, and and, the gut is such a central place as a, as it pertains to chronic immune dysfunction. So much of our immune activity happens at the gut, barrier, in particular.

And when it comes to lack of digestion of foods, that can aggravate the inflammation and the got barrier. And when it comes to improper ability to remove things from the gut, aka constipation or dis motility, we can have a buildup of toxins.

And so I'll go into that, talk about the amenities. But just to kind of center our attention on the God as like the PRI, one of, if not the primary arena where a lot of this stuff is taking place.

And so the amenities I loved this concept for NAS and Natural Traffic medical school, because there didn't seem to be as much emphasis on it, in conventional medicine.

And it seems so central to the idea of how do we promote optimal health. And the long term is are the organs of

elimination. And a lot of times these organs also have other functions that we tend to focus more of our attention on.

And we forget that they're actually really important in helping our body get rid of waste material, whether that's cellular, metabolic waste from our cells just doing their normal functions, or whether that's actually toxin removal of what we would call xeno biotics or substances that are foreign to the body.

A lot of these are synthetic, but also biological toxins such as microbial wastes, and micro toxins. And so the hunter is what are they there? The, urinary system.

So that's going to be the kidneys filtering the blood and that things come out through through the urine. That's the, skin, which we often think about the skin as regulating temperature and moisture and protection and all that.

How the Body Removes Toxins

But we don't often think about the skin as an organ of elimination. We actually sweat out a lot of toxins. Mycotoxins, synthetic organic toxins, and even heavy metals can be removed through the skin.

The lungs, interestingly enough, we exhale carbon dioxide primarily as a waste, but other other substances as well. This is kind of an aside, but garlic, the reason garlic breath is so difficult to get rid of is because it's not just in your mouth.

It's actually we're breaking down. There's sulfur containing molecules in the lungs and exhaling those. And so unless you were to, you know, nebulizer or something, it's kind of hard to get rid of that anyway.

But then our feature system for today is, is the, the liver, the gallbladder and the large intestine are really that whole integrative system, a.k.a. the digestive system, but primarily the liver and biliary system.

So what that looks like is the blood is filtered, toxins are removed, and they go through phase one and phase two, metabolism and the liver. That basically is a process that allows the liver to, that allows these difficult to, dissolve or remove toxins to be more soluble and are able to be actually eliminated through the body.

And so that gets concentrated into bile, which is a kind of fat soluble, and also fire that gets dumped through the gallbladder into the small intestine.

And then that goes through the GI tract. Now here's where things get really interesting. If I may keep going and kind of go for it, I get a lot, but, the, the where things get interesting is our body's evolved the ability to reabsorb bile.

And this is called entero hepatic recirculation. And this is a really important concept because it it it speaks to kind of why we need binders and why we need to kind of make sure things go out of the body instead of recirculating.

And so this is an incredibly adaptive, mechanism that recirculation and conservation of bile when we weren't getting that much fat in our diets. So when our ancestors were right around foraging, you know, doing what they were doing, and they maybe ate animal products, unlike a feast or famine type basis, you needed to conserve bile because bile salts allow us to digest fat and, you know, do a lot of other things.

The problem now is we don't have that issue, and yet our bodies still will conserve bile and recirculate things. So any fat soluble toxins, which is most of what we're talking about today that are dissolved in the bile, if those don't get eliminated from the body, they're going to recirculate.

So not only is the bile, but everything dissolved in the bile is recirculated. And so that's why we think about things like binders. Binders are going to bind to the bile sources.

They're going to they're going to, keep it in the intestinal tract. So then when you ideally have your bowel

movement the next day or later that day, stuff comes out, right.

Ideally having a bowel movement and binding. That sounds a little, hard if somebody is having trouble having bowel movements. Let's maybe, touch base on the the elephant in the room here.

When the system isn't working very well, constipation or, you know, slow motility or, you know, the bowel systems not working, the, the gallbladder, all that kind of stuff. So.

But we could we can, highlight the constipation piece. So is that something you're evaluating when you're seeing these folks for the first time? Absolutely.

So that's one of the first questions I ask is how often are you having bowel movements? In naturopathy school, we learned this wonderful thing called the Bristol Stool Chart.

If you're not familiar, it's a way of quantifying. That's consistency of stool from very, hard and difficult to pass to, liquid, basically 100% liquid on a scale of 1 to 7, respectively.

We went for type four, which is right in the middle, well-formed, not difficult to pass, not too loose. Yeah, but so often we're seeing chronic, environmental toxin, folks, including those with micro toxic illness, not able to have daily bowel movements.

And this is one of the things that kind of pricks my ears to the possibility if they don't have an obvious history of mold exposure, that makes me think, okay, if there's some constipation going on in there, especially if it's severe, like I'm having bowel movements once a week or I'm having bowel movements like, every couple weeks.

I've actually heard that a couple of times. More commonly it's like every 2 to 3 days. But even that is going to affect our body's ability to remove, metabolic waste and, and, and anything if we're incorporating binders.

So if folks are constipated when you come, when they come in, giving them binders often makes things worse. Unless they're fiber based binders. I learned about a lot about these tricks from from Doctor Kunkel.

So we'll talk about those for sure today. But like what kind of binders would you use. And somebody's constipated. That's its own topic. But what are we doing in terms of, they're not having regular bowel movements?

Would you start them on a clay based or charcoal based or something like a diamond type binder right away? And my, my, my experience is definitely not because then that, that that stops things up.

There's a doctor who does a lot of educational training who says when you're doing a detox protocol, constipation isn't allowed. And I always appreciated that. Yeah.

And so, so what I, what I will often do is make sure that we're opening up those and laundries by, giving things like digestive bitters. You know, I can talk a little bit about how those work.

Magnesium citrate, sometimes ginger or five HTP, basically all these things that are going to help jumpstart, the nervous system, and the blood flow to the GI tract and then soften stool with something like magnesium citrate and keep things moving so that stuff can get out before we start binding.

Yeah. No, I like that. Well, yeah. So yeah. Explain to the viewers here, how do you how do bitters work exactly. How did how did the some of these kinetic or, you know, motility agents work, you know, here for the gut and why and how are they also, if at all friendly to, the process of detoxification?

Yeah. So, so bitters are bitters are truly exceptional. And what they do and how they work is very interesting. So we have these taste receptors in our mouth, that, you know, that we would think about salty, sweet, you know, bitter, you know, sour, those kinds of things.

But interestingly enough, the bitter taste receptors are not just in our mouth. They're actually all the way through the GI tract. Which makes it interesting.

It's like, well, should we be even calling them taste receptors or are they doing something else? And they are they are doing a lot of things.

Constipation, Motility, and Bitters

And so what they do is they when we taste bitter and it starts in the mouth and then goes through it stimulates every stage of the digestive process. So increase saliva production, increase stomach acid production, stomach enzyme production, pancreatic enzyme production, bile production, and then motility, which is movement of the intestinal tract, also known as peristalsis.

It's kind of like if you were to think about, squeezing a tube of toothpaste from one end across the other, you have these smooth muscle contractions that are going throughout the GI, and that's moving food and ultimately moving stool.

And so what bitter tastes do is they, they bind to those receptors and they stimulate all those processes. And so you can imagine in our, in our standard American diet, without that much without very many bitter foods, this process can, can become impaired.

That's why a lot of folks like coffee, coffee is probably the primary bitter food in, in an American diet. If you're not eating a lot of vegetables, you know, part of why we start our meals with salads is actually to do that.

A lot of it. Salad greens are better, and they stimulate that. And so that's kind of how bitters work. Bitters are my personal favorite for patients struggling with constipation.

I've seen folks, that are on opiates for pain or post-surgical recovery and where, you know, they're using stool softeners, they're using magnesium, they're using laxatives.

You know, ginger, sometimes everything. And it's but it's the bitters that I see being the most impactful. And they tend to be very well tolerated, even by sensitive folks.

Yeah. No. That's awesome. I love bitters myself. A little bit goes a long way sometimes for people, too. It's, fascinating, I know, and it's really interesting that so much of the digestive tract responds to it, not just the taste of it.

It's like I always think back to like, essential oils, how like the skin has all factory receptors, like the skin smells like the the gut tastes, you know, it's really, really fascinating stuff.

For sure. So yeah. So this constipation, issue can be a really big deal, in more illness. And I think we, discuss a little bit of, you know, the mechanisms as to how you know, how it can be detrimental.

But, Yeah. Could you could you elaborate a little bit on on that end of things? You know, how how the constipation is, is not good for, for mold illness?

In this regard. Yeah. So there's a there are multiple mechanisms physiologically that that can, can, can explain why micro toxicity causes or aggravates constipation.

You know, hormonal dysfunction especially the thyroid, can affect motility. The, nervous system, especially the vagus nerve, it tends to affect my and so if there's inflammation or dysregulation there, micro toxicity tends to contribute to limbic activate over activation, which is that part of the brain that regulates the fear response and feelings of safety.

And so if we're in fight or flight all the time, you know, or fight, flight or freeze, especially thinking about the freeze

from like, okay, if the side if we could kind of go on a tandem with that.

But the the freeze response says, oh, this isn't safe, I'm not going to move. You know, and we think about that in the gut. It's like, okay, well, I'm going to hold on to stuff.

I'm not going to let things go. Right. And so there's the nervous system. There's the endocrine system, you know, aka hormonal system. And then there's inflammation at the gut lining.

And so especially for getting molds from foods or from the respiratory tract, you know, the sinuses and the nasal passages are interconnected with the guy just the further down you go.

And so oftentimes, you know, these are things that are going to contribute to dis motility and lack of removal of things from the body. And then when we think, why is this a problem?

Well, it goes back to kind of what we were talking about earlier with the among turkeys, and how the liver, gallbladder and gastrointestinal tract as a way of eliminating toxins from the body is absolutely central.

I had a patient yesterday ask me a phenomenal question, which is if I can't take a binder, am I can I still detox? What happens if I take all these cellular detox agents, like with diet and vitamin E and calcium D glue?

Great. And phospholipids? If I'm not taking a binder and I said, well, we are still detoxing, I'm trying a little bit through the skin, especially if they're doing a sweating practice and a little bit to the urinary system.

But the GI tract and the liver gallbladder system is, is absolutely key. And so I will treat I think it's worth it to spend as much time as is needed to restore motility and regular bowel movements before binding.

Then kind of trying to skip that step and say, well, let's give you a bunch of detox agents that are going to pull stuff out of of storage and get them into circulation and then have them have no where to go.

Essentially, they just become recirculated as the bile gets reabsorbed. So, sure, that and then, of course, there's also a lot of microbiome dysregulation, with folks.

And so if you have microbes that aren't so friendly, they're going to be secreting their own waste. And if you're constipated, that stuff kind of builds up to shore.

So would you, would you use, probiotics in these cases too, or how would you help the biome? That's a good question sometimes. But oftentimes if there's just motility and things are moving, you end up with either, a migration of bacteria from the large intestine where they're supposed to be upward into the small intestine, or if you have not enough stomach acid production, you can have bacteria that are supposed to be killed in the stomach actually migrate downward into the small intestine.

In either case, it can it can cause what's called small intestinal bacterial overgrowth or severe symptoms. You'll hear people say Sibo as well. And so Sibo can aggravate constipation.

It also means there's too many bacteria where they're not really supposed to be. We have we have like a fraction of the amount of bacteria in our small intestine than we do in our large intestine, and so giving the probiotics to somebody with this motility can often aggravate that.

But but but there's an art to that. Right. So sometimes we think about spore based probiotics, which actually kind of kills some of the guys that aren't supposed to be there.

And so there's a there's a nuance there sometimes Saccharomyces Berardi II, which is a beneficial yeast, great probiotic to have on board when you're doing antimicrobials.

That can flare people with mold sometimes. Not always, but sometimes. And so it can also help detox mycotoxins.

So there's a there's definitely a lot of complexity that we kind of have to navigate.

And and just for our viewers not to overwhelm you, this is why it can be very helpful to have, practitioner, health practitioner as your partner on this journey.

Definitely. Because, yeah, this can get really frustrating, can it? I mean, you can read everything online that I have to be doing this binder, I should be doing this probiotic or I should be doing this.

Go to my own or something like that. And then, you know, every time we try to do this, it makes me feel worse or makes me, you know, you know, it makes me more constipated or something like this.

We mentioned Sibo. That's always an interesting one. Small intestine, bacterial overgrowth, or in some cases, small intestine fungal overgrowth, which is interesting.

That that also can, you know, make a challenge can in terms of, binders and stuff like this, you know, fibers might be, you know, more reactive or something along these lines.

How do you how do you navigate some of those dynamics with Sibo? Yeah, that's a great question. So, so when we think of it and then we haven't talked about fiber yet interestingly enough.

So I'm glad that let's talk about fiber then. Let's talk about it. So you know we we've covered most of us have probably heard of eating a plant a high, high fiber, high vegetable diet is a great thing from, bowel regularity standpoint, from a colon cancer prevention standpoint, from just an overall health standpoint.

But this can cause a lot of folks to get into a real bind when they have chronic GI issues. Where fibers can cause diarrhea or constipation, even where they can cause gas and bloating, abdominal cramping, burping, you know, those kinds of things.

And a lot of that comes down to what we would call fermentation, which is the microbes in our gut say, hey, free food. This is awesome. And they digest our fibers before our the, the fiber from our food before we're able to.

And then that creates a lot of gas and a lot of distention. A lot of times abdominal discomfort. And so getting a bunch of prebiotic fibers, getting a bunch of high fiber vegetables, especially more fermentable ones to somebody with Sibo or CFR, that's the yeast or fungal overgrowth that can sometimes aggravate.

And so you can you either have to find out where fiber is that an individual can tolerate, or you kind of, use something like the specific carbohydrate diet or the low Fodmap diet as like a guide to, okay, these are foods that are less fermentable and less likely to aggravate.

Fiber, SIBO, and Binder Strategies

And these are, you know, foods that I should be eating because we do on some fiber, especially if there's constipation. We just need to find the right kind of fiber.

All these what would be some starting fibers you would think of for the more, you know, sensitive situations here? Yeah. So the that's a good one. The the coming off guide just a little better.

Oh yeah. Oh that one out I don't, I haven't gone lo pharmacist folks that don't allow that. That would be a really good starting point is looking at I mean, there are less that are readily available, which is, you know, which are low, low Fodmap foods.

But we could certainly have. Which ones are you thinking of typically. And. Oh yeah for sure. Yeah. No, I mean, I may not even start with, you know, fibers entirely.

In those cases, I would I would have to say person on a personal level. But, you know, in some cases I will, you

know, kind of work into, you know, some of them out there.

But yeah, I will I will talk about that in a little bit, though. It's not a problem. We can we're going to we're going to move to a a different avenue here.

So so, so how about non fiber stuff though. Like how about how about like gentle non constipated non fiber. Binders. Is that a possibility. Yeah. So the the non cosmetic non type.

Well depends kind of who you ask. But I think about modified citrus pectin as not being a very potent. It's not really too fibrous. Some of the formulations of it do have like polyols or sugar alcohols and things, especially the tablet versions of them.

But I, I use a fair amount of modified citrus pectin. It's not a super strong binder. But it's a fine place to start. Chlorella a lot of folks do okay with it can be concentrating as well if you take too much of it.

You know, some of the humic phobic, you know, mineral blends. There's, a few brands that have developed more sensitive formulas. That that Doctor Kunkel and I have talked about.

I don't know if we can talk brands on this or not, but there are some out there that are that are gentler. I always try to frame that as this is a starting place and we're working on your gut because we're we really almost often, almost always need some kind of charcoal or zeolite or bentonite or, you know, Purple Man and is getting a lot of attention nowadays.

It's not a super strong binder, but it does bind every type of micro toxin. According to the research. And so I find having a rotational schedule with binders is key when it comes to mycotoxins removal.

But it's a journey. And so, as you said, you know, the journey of a thousand miles begins with a single step. And so step one is let's keep things moving.

And even if there's just a little a gentle reminder that we can start with, that's, that's, that's better than no binder. And then we just kind of build on that over over weeks to months, depending on, on, the progression that we're seeing.

I know one concern I get with binders quite a bit from patients too, is like the timing of the binder. Like, what's the best time to take the binder? When should I not be taking the binder, so to speak?

Or am I going to bind good stuff just as well as bad stuff? You know, could you could you speak to that, concern? Yeah. So it depends a little bit on the binder and also depends a little bit on the person's situation.

And so, so what I'm about to say I learned from you, actually, doc is uncle, which is, you know, taking a binder at night is a great is a great if you have a gallbladder, right.

If you don't have a gallbladder, this doesn't necessarily apply. But if you have a gallbladder according to Chinese medicine, I'm sure you can elaborate this more than me.

But according to Chinese medicine, the gallbladder is most active during that 24 hour cycle. Of 11 to 1 11 p.m. to 1 a.m. I remembering that correctly?

Yeah. The gallbladder has. Yeah. Yeah. That's that's that's 11. Yes. That's great. So and there's a, there appears to be, you know, kind of a gallbladder dumping of, of bile that happens in a more pronounced way during the night when we're sleeping.

And so if folks aren't taking if, if I have folks who are, who need a lot of sleep support medication or supplies, then I may have them take a binder in the evening, at least an hour to an hour and a half, sometimes even two hours, depending on what their motility looks like before they take anything else.

And so if a patient's not able to take a binder right before bed because they need to take other things, I'll have them take it, you know, between dinner and bedtime, essentially, if they don't have a gallbladder and we're not and we're not, you know, we're there that way.

Or in cases like that, bile is just kind of always draining into the intestinal tract. That timing is less important. I know there are some protocols where binders are dosed in the morning.

Because that's a little bit easier logistically. It's first thing in the morning. You take it an hour and a half to two hours away from anything else.

And that's the strategy. That's, that's fine as well. And so from a clinical standpoint, I haven't necessarily seen dramatic, differences. It's more a matter of logistics and what's feasible for that person.

We're also often trying to juggle, many supplements. Sometimes that's an understatement. And folks with chronic, like a toxic illness. And so we're weighing those factors as well.

Yes. Very interesting. So, so say you, fix the constipation here. Now, we're kind of getting things moving along as far as that goes. You know what what what do you want to step up in the gut?

Like, what's your what's your ideal sort of end game for approaching the gut in these type of cases? Aside from just what we've already discussed. Motility. Yes. Very good. Yeah.

So a lot of it depends on so it's a thorough assessment. And in a comprehensive, individualized assessment is is key. And so if somebody is complaining of gastrointestinal symptoms, that's going to really, hone my attention in on saying, okay, we need to figure out what's causing this, or is there a dysbiosis aka imbalance of the microbiome that can include, opportunistic organisms that don't cause issues for everybody.

But when the immune system is stressed, they cause issues that could include frank pathogens, which are bad guys and are never good to have, you know, salmonella, Campylobacter, the, you know, there's many that we can talk about parasites for sure.

Our consideration there as well. And so, you know, assessing the microbiome in folks that have gastrointestinal issues, we do a whole talk on just parasites.

So, yeah, as a, like, oh, that's a whole topic. And the limits of testing for parasites. But basically evaluating whether or not there are pathogens or dysregulation in the microbiome, evaluating how much inflammation is in the GI tract.

Are we dealing with inflammatory bowel disease or are we dealing with more subclinical inflammation, from food sensitivities from, the like I said, the microbiome being dysregulated can cause an increase in inflammation of the GI lining, irritants.

Right. So if somebody doesn't have a gallbladder and they're draining bile all day, that can cause irritation. And when that causes symptoms, it's known as bile acid diarrhea.

And so sometimes we see that, the, stomach acid production, gastrointestinal, digestive enzyme production, these are all factors that play a role. And so I'll often do a stool test, I'll often do food sensitivity testing or at the very least, a trial elimination diet, which is where you remove for a temporary period.

You say 4 to 6 weeks, of common environmental, common food triggers for folks. And to be clear, these aren't necessarily allergies in the sense of when I eat this food, I need an EpiPen immediately, or, something very bad is going to happen.

But more low grade delayed type immune, what we call hypersensitivity reactions. And these can can also just the the guide and a microbiome can contribute to leaky gut that kind of stuff.

And so I'll often do a, food sensitivity test and I see about breath test, you drink this drink and, you know, you collect breath samples at certain intervals and that basically says how much your gut ferments it and what types of gas you produce.

And then that will kind of tell us what types of bacteria are potentially overgrown. So comprehensive assessment is the short answer. And then treating that treating each individual.

And we have a variety of tools to do that. And so if there is a leaky gut or an impaired intestinal barrier function it's the same thing, just more technical.

You know, we're going to do things that are going to help soothe the GI lining and repair those tight junctions. If it's really inflamed, we're going to give anti-inflammatories that are primarily focused on the gut.

If it's microbiome related, we're going to give things that, you know, I call it weed seed and soil. It's like you give you give antimicrobial herbs off and sometimes even antibiotics to get the bad guys out.

That's the weeding. And then there's the seeding.

Gut Testing and Microbiome Repair

I like spore based probiotics for that because they tend to not aggravate, sometimes sensitive folks, especially folks with no toxicity, just have to go really slowly with dosing that, you know, opening up the capsule, that kind of thing.

And then the soil, you know, we could kind of talk about this a little bit, but there there's there's some interesting work. At a weather company in, in Portland, working on, fecal derived, post biotics, which are post biotics are basically, metabolic, beneficial metabolic byproducts of, of the microbiome, like when they're when you have a healthy gut, a healthy microbiome, they're going to be co digesting our food with us.

But it doesn't cause issues. That actually is really health promoting. And so I, I won't necessarily go too into that. But there's some thinking about.

Post biotics is kind of the short answer of of the soil. Yeah. Right on. No, I like that. That's awesome. So so do you feel like, getting the biome in balance is also going to help us do toxin?

Yeah, absolutely. And so the the microbiome can be our friend or it can be our foe. And so if, if, if, if folks are having microbiome dysregulation, as I touched on earlier, they're also generating a lot of waste.

They're like, yeah, you could have good bacteria that generate beneficial things, which we call post biotics. That's technically still waste, but it's waste that's good for us.

It's like just like trees, you know, they they utilize carbon dioxide and then release oxygen for them. Oxygen is their waste. But it's good for us. And then we release our waste, which is carbon dioxide, which is good for them.

And so all, all throughout nature, we see these symbiotic relationships where these organisms work together. And our microbiome is so central to our health.

There have been there's a great book on this topic called the The Gut, the Mind Gut Connection by Emmer and Mare. He's a functional gastroenterologist.

That goes into the science of how our microbiome. Yeah. Throughout the body, 1010 microbial cells. There's ten microbial sites for every one eukaryotic cell.

And so and then the metabolites circulating in our in our blood, there's a hundred of those from microbes for every one human. So we're we're an ecosystem.

We're not even an organism in that in the sense of being isolated from the natural world. And so the health of the ecosystem is the health of us. And so if the microbiome is not, working for us, it is often a detriment, to health.

And there there's a whole lot we can, you know, get into about how best to do that. And but those are kind of the foundations to think about. Right on.

Yeah. The microcosm and the microcosm also here. Speaking of the macro, we mentioned diet a little bit, you know, kind of, you know, our broader environment around us and kind of maybe how that, you know, plays a role, in these illnesses.

I know that a lot of folks, you know, express, you know, concerns about, certain things in the diet, maybe, you know, containing mold or worsening mold.

Syndromes or something like this, too. How do you, you know, without getting into obviously, it's completely individual. But, you know, as a superficial point of discussion, how would you, approach in an ideal, you know, diet for, for the gut, for detox, you know, for avoidance of, you know, mold related sensitivities?

Yeah. Great. So, so I, I direct my, my patients to Joe does work. She's done some truly exceptional work in paving the road for for treating, mold toxicity and all the other natural pillars like diet and lifestyle that go into that.

And she has some great information on mold free diet or, and I believe she'll be interviewed as well during the summit. So you'll get a chance to talk to, will a chance to talk to Doctor Jill as well?

I'll talk to Dr. Krista. Great, great. Then I don't want to. I don't want to watch any, of her work, but. But she has some great handouts, on, on on lower mold diets.

And so things like nuts and mushrooms for some folks can be aggravating. You know, with Proteus, it's tricky because there's so many good things in vegetables, like the sulforaphane and the glucosinolates and, you know, sulfur containing compounds that are going to increase glucose, iron production in the liver and really end the fiber.

You know, all that stuff's really good. But, you know, you don't want anything that's that has visible mold on it, which kind of almost goes without saying, but, you know, sometimes the things that are sitting in those, moisture dens in the produce department, you know, that that can be a factor that we think about as well as some diet.

I mean, I just want to acknowledge, you know, diet when you're chronically ill is is it can be very stressful. And we want to just do the we want to do the best that we can is kind of what I, when I, when I throw what I offer patients, which is let's work together and figure out what foods you tolerate from a digestion standpoint.

And then let's work together to try to minimize exposure to foods that we know are high and mild. And then and then we focus on foods that may have some mold.

But getting them, minimizing exposure, airborne exposure, seems to be, you know, kind of a that at least for me, that's that's what I focus most of my attention on for folks.

Yeah. Making sure they're environment safe with, I'm going a little off script understandably here, but, well, this is another question I get a lot, though, too, is, you know, when is it that my mold is actually, like, infecting me or not?

Maybe not infecting me, even colonizing me, like, in my in my gut? Like, at what point do you think about maybe treating mold as a sort of infection or something like this?

What is it? What is your what is your, sense of that? Yeah. So the way I was trained and then kind of the way that I, have kind of seen that play out is you don't want to start antifungals too early and somebody who already has a high micro toxin burden, because if there is colonization, of mold or a yeast, even Candida, can produce certain mycotoxins in the gut or in the sinuses.

And you start, you know, nuking them, and they're going to be releasing their micro toxins. And then if somebody already has, a pretty full toxic bucket that can overflow and they can feel a lot worse.

And so I'm almost always worried, making sure that when I go down moments that I'm starting them on binders, you know, thinking about antifungal herbs, those are, those tend to be more gentle.

There when I'm, when we're doing binders and we've been doing them for a while and we know that we've gotten them out of their moldy environment, which sometimes is easier said than done.

The if if they're not substantially improving or if they hit a plateau. That's when I'm really thinking about colonization. I often preemptively assess their gut and their sinuses.

I'll do a, a sensitive nasal culture that, assesses for, multiple antibiotic resistance staph as well as, fungal colonization. We may not always see fungal colonization.

The, the lab we work with, I love because they'll actually keep the fungal culture for an additional two weeks if it doesn't grow in that first time. And so it does improve the sensitivity.

Sometimes we see I do see it, but but there are other times where it's like this. I'm really suspicious of colonization, but we're not seeing it. On the culture.

Do we still tree? And so I'll do a lot of nebulizer thing. There are certain nasal sprays that can be helpful. Nasal ozone can be helpful. As long as you don't inhale it in your lungs.

I would would recommend that you talk to your doctor. If you're thinking about doing nasal ozone installation. And then, you know, gastrointestinal antifungal stuff is going to be your, you know, herbs, prescription nystatin.

And then there's the systemic antifungals like, that is all antifungals, or liposomal herbal formulation. Yeah. Right on. No, I like that. Yeah. There comes a time where that conversation may, may come up in this journey.

It's true. But first things first. Get in the gut and work in order. So that's what we're looking to do here. So, yeah, very, very helpful here. What other, So, so you and I are both naturopathic doctors, too, you know, and, you know, some things.

You know, I consider us both integrative, too. You know, maybe we do a little bit of this and a little bit of that and all this kind of thing, but I really like, our natural ethnic roots and background, too.

And I'd love it if if there's anything else you could add, from a natural ethnic perspective here on, that we haven't discussed yet, for treatment, for approach, for, you know, understanding these illnesses and how, you know, how to get how to get them moving in the right direction.

Diet, Mold Exposure, and Antifungal Timing

Yeah. So there may be other doctors and or others, other speakers in this conference in touch on this, but, just to kind of whet your appetite a little bit, the limbic activation and the PTSD and the anxiety component is what I see to be one of the primary obstacles to full recovery from our toxic illness.

And this is one of those things that I, I, I didn't focus a lot of attention on initially. It was I was very, focused on untreated, and everything we've talked about today.

But what I've seen is that there tends to be significant anxiety, and this is very understandable. You know, it's my home isn't safe. You know, it's my brain is inflamed.

If my gut isn't working, if I don't know what to eat, all of these things are going to contribute to hypervigilance in the nervous system. We also often see, the, There was something I was going to say, and I totally lost it about, the, the

nervous system being hyper activated and, oh, the isolation of living with a chronic illness that is not often understood or accepted, especially in mainstream circles.

A lot of folks that I talk to have been been to so many doctors who have said I had no way that it could be mold, you know, there was no I you know, if you have, you know, infection, chronic infections as well, like Lyme disease or co-infections, which we see a lot coexisting with, with, with micro toxicity.

Oh, we don't believe in that or. Oh, we don't have anything for that. Here's a referral to, occupational therapy and psychiatry and this this is traumatic.

For a lot of folks. And understandably so. And so the conversation that I really like to have with folks is this is not in your head. This is a real experience.

This is physiologic. Your body is changing. But what part of your body is is also your brain, which is a structure. And so as the brain changes in response to trauma, as the brain changes in response to micro toxicity, as the brain changes in response to infection or, inflammation, there's a process called micro glial activate, which is where the immune cells in our brain become primed to over respond to things.

And so that's when, you know, we see neurological inflammation show up as, you know, brain fog or fatigue or, you know, anxiety and depression in those capacities.

And so we got to suss those pieces out. But I do find that I can't ignore the fact that we often do have to treat the anxiety and the PTSD as its own thing, but that's deeply connected.

And so hit by a reset where I work now, you know, we have a few tools that we use to do that. We needed to do I b ketamine. We do, a doctor, Matthew Cook, who's an anesthesiologist who runs our practice, does something called the stellate ganglion block, which is, ultrasound guided, nerve block of the sympathetic chain, which temporarily shuts down the fight or flight response.

And kind of it's like a reboot for the for the nervous system. And that's, that's that's been helpful for a lot of folks. And then everything natural that we would think about, you know, brain retraining, programs, there's that group to program and the, DNR program, nerve and botanicals that increased Gaba activity in the brain and are calming.

Taurine is phenomenal. It's calming to the brain. It also helps you detox. And so the brain and the body and then the mind and the body, they're they're not they're not, they're not, they're not separate.

And so natural path like, you know, the way I describe it is body, mind, spirit environment. You know, it's all interrelated. And the degree that we to which we have tools to intervene on these different levels doesn't necessarily mean that these levels are separate from one another.

It's just how do we approach them? Yeah, that's all I really do for sure. That's what I really enjoy about our medicine is how everything is, interconnected.

You know, how we interconnect everything. You know, like the mind and the body, the the gut and the brain, you know, I mean, right, in this case, it. Yeah, that they are connected to either the vagus nerve or, you know, I mean, there's a lot of different ways in which they're connected, which is really fascinating.

Do you find sometimes to just curious, do you find sometimes if you, treat the gut the, the, the neuro psych symptoms as they're described, you know, also improve often often.

And the mechanisms of that are and I've been doing this for a little while, even in med school, working on this with myself and working on this with peers, you know.

So there's been a number of years that I've been thinking about this interrelatedness it's still astounds me. I mean, it absolutely blows my mind that when you decrease inflammation at the gut barrier, you often can think clearer and

you're less anxious and more less depressed, and you're sleeping better when you change the microbiome by getting rid of pathogens.

You know, I I've noticed some people tell me when I do antimicrobials in the morning or when at whatever time, and then I take binders at night and then I have my bowel movement in the morning.

I feel less anxious after I have my bowel movement in the morning, because you've taken a night, you've gotten all that stuff out. And so, you know, changing the microbiome.

And in even just a few years ago, there was an a mainstream news source. Some case I wouldn't necessarily call them case reports, but case vignettes, I guess, of of patients who were being treated by psychiatrists, and were not responsive to, what's this?

Pretty severe psychiatric illness, not responsive to medications. And then they were given a probiotic and then their depression left it. Wow. So this doesn't apply to everybody for sure.

There's a lot of complexity there. But but absolutely the main gut the gut brain microbiome access as it's called is is deeply is a is a central network, how we feel, our microbes, produce neurotransmitters and, hormones.

Neurotransmitters, our brain signal molecules. That they make things that are structurally analogous to our own. And so even things like food cravings, it's like, okay, who's talking?

Is this me, or is this my gut microbes? And having abundant amounts of lactobacillus and bifidobacteria in the gut, is associated with increased Gaba production.

They make Gaba in the gut and then that signals through the vagus nerve, presumably to decrease, the activity of the amygdala and calm things down. And so the short answer is, yes, but how that happens is, is just so cool to me.

Yeah. No. That's awesome. I always love to hear those, stories. As far as this go, that's definitely an observation that I've seen in my own practice as well.

So, really fascinating. And we are unwinding this, you know, many, I think probably ten years ago, we didn't even know that the, you know, blood brain barrier, you know, was as it is, you know, it was just sort of a working theory, you know, now we know that's very similar in some ways to the gut barrier.

Nervous System, Gut-Brain Axis, and Lymphatics

So, yeah, there's there's a lot of we didn't even know that there was lymphatics in our brain until recently, which is really interesting too. So speaking, I mean, if you want to quickly you can speak to lymphatics.

It's kind of a fun, fun concept to. But the gut's pretty extensive in lymphatics, too, isn't it? Yeah, lymphatics are super cool and under off and under under emphasize and and the mainstream, lymph fat.

So what happens is when our blood is being circulated throughout the body, it's delivering nutrition to tissues. And a lot of times that fluid is bathing those tissues.

And then it needs to be reabsorbed. Otherwise we would just be these big, puffy, you know, pools of fluid around the extracellular space. And so that needs to be reabsorbed.

And then it ultimately gets recirculated back into the bloodstream and those channels or vessels, you know, pipe system, basically that reabsorb that fluid is called the lymphatic system.

And we have these lymphatic channels and vessels and lymph nodes, even where there are immune cells concentrated, you know, throughout the body. And there is actually a lot of them in the brain.

And then they got to basically anywhere that's getting a lot of circulation of blood, needs to have concentrated lymph vessels to help reabsorb that fluid.

There has been some great and I'm not going to do justice. Doctor Tom Moorcroft did a phenomenal talk last spring at the AMP infectious Disease conference on the Lymphatic System in the brain, and strategies for supporting that.

I highly recommend checking that out. If you're able to get the recordings for that, the, but essentially there are these aquaporins and these, you know, channels in the, in the brain that help regulate, fluid drainage, out of the brain and into the rest of the body.

And there are a variety of ways in which those channels and those, draining vessels can become impaired, and that can lead to toxic buildup in the brain.

And that's part of what's associated with dementia and cognitive decline. And so and in the gut, it's very interesting. And I'd want to do some review on the specific mechanisms and the bad drains.

And then I think there is a lot I mean, there's the gut associated lymphoid tissue. Right. Gold and malt, that we learned about in medical school. Yeah. And anatomy. But what are these things doing?

I mean, they're regulating immune function and they're regulating toxin removal. And so the degree that we can support circulation and drainage of lymph, the degree that we we, you know, have a healthy functioning system and that's for herbal medicine is truly phenomenal.

Conventional medicine, at least not until I graduated from school. Maybe they're into drugs now, available now. But to my knowledge, there aren't any medications that are that are lymphatic that support lymphatic flow and drainage.

But there are a ton of herbs that do that. And so, you know, we think about that, we think about dry skin brushing, sleep position can affect lymphatic drainage from the brain.

There's, Doctor Kunkel formulated, when I was working with him at revelations, that great, tincture combination of herbs for, for, brain, lymph and just general lymphatic flow.

And that's been helpful in improving sleep for some of my patients, and just overall quality of life. So there's a lot of things we can do. Sauna sweating, you know, movement, stretching, massage.

You know, lots of things that can support line flow. Love it. Yeah. Lymphatic massage is out there too I love, I love yeah, the lymph is like another among tree of consideration.

We often forget that's true. It it's all interconnected you know. Yeah. So working in an area that stuck or stagnant kind of opens up other areas too, which is really fascinating.

So if it's like, oh, in the neck, you know, that's like one of the prime drainage points, you know, you want to work there, you know, first sometimes.

So really cool stuff. I won't get into lymph, although it was just, you know, I took an opportunity. We're almost out of time, though. I wanted to, you know, ask you kind of, you know, some of the exciting things that might be going on over there at Bio Reset with, yourself and, Doctor Cook.

I know you guys are always, doing some interesting things, but any anything new in the world of, mold that we might be looking forward to? Yeah. So we're, I joined by a recent medical and in center in the San Jose area about about seven months ago.

And, and it's been super exciting to kind of take things to the next level with IV therapy and with regenerative medicine, particularly ozone therapy.

And so we do everything that kind of that. Doctor Kunkel and I discussed today around functional and personalized functional integrative naturopathic medicine.

But we're also doing a lot of things. I, you know, I intravenous I. V. nutritional therapy, I. V. glucose, iron for folks that tolerated I. V. nad for folks that tolerate it.

And, various types of IV ozone therapy. So if you may have heard of the ten pass or the Multitasks, we do that, but we also do something, that's fairly unique and that's called extracorporeal blood oxygenation and ozone ation or EBU.

And we have two variants of that. We have ozone dialysis and we have ozone plasma for reasons it's a similar setup.

BioReset Treatments and Closing Remarks

For both of them you have two IVs, you have one pulling blood out, running it through an elaborate filtration system and ozone eating it and then returning it, to your other arm.

And this is happening kind of continuously for about 45 minutes. The difference is ozone dialysis is a higher potency of ozone. And it's a little bit more anti-microbial.

It's great for acute infection. At least that's what we're seeing clinically and then but it and it has a little bit of detoxifying effect. Not as much as plasmapheresis as, as some plasmapheresis, but some.

So it's going to be removing some microbial debris, and some of the proteins, it kind of creates this foam like, filtrate ozone, plasmapheresis. That is very interesting as it pertains to micro toxicity.

That actually removes about 20 to 30% of your blood plasma, which is the liquid portion of the blood, and returns your cells essentially, conventional plasmapheresis, which has been used in hospitals, and other centers for autoimmune disease treatment, where it basically removes all of your plasma, which is the liquid portion of your body.

So it's siphoning off antibodies, autoantibodies, that, are causing the autoimmune flare. And then you often will get IVIg. This one is much gentler. And then there's a little bit of ozone as involved as well.

And so we have a lot of folks with micro toxicity saying, oh, I feel mentally clear after doing that I have more energy. It's kind of like if mycotoxins are circulating in the blood, you can get through, get out, get out of it, get it out of you through your monitors.

But you can also kind of skim it off the top a little bit. And that's what I was in Pleasant Francis is doing. So maybe I sneak into another a monetary which is removing toxins directly from the blood.

Oh yeah. Totally. I think back to the old herbal like alternatives or blood cleansers. You know, there's a lot of different ways to cleanse the blood, so to speak.

So that's an interesting, interesting thoughts. Yeah. All right. No I like it. Thank you very much I really appreciate you taking the time, to, to speak to our viewers and talk about mold.

And it's always good to talk to you. As you know, doctor, your doctor plants a good friend of mine, as well as a, awesome colleague here. In the field of, complex tri disease syndrome.

So you can find him at, bio reset in Campbell, California. And I myself am with Gordon Medical, so we're going to sign off here for today. Any last thoughts, though, to leave us with here?

It's, it's a beautiful sunny day in California. I wish everybody a peaceful, peaceful, journey with with your health and

we're here to support you if you need anything.

We are. We're both available for telemedicine in California. Yes. All right, well, you have a good afternoon. And, to all the viewers as well, take it easy out there and, yeah, we'll be talking to you soon.

Thanks so much for having me. Have a good one. Thank you.