Introduction and Guest Background

Welcome to Mold, Mycotoxin, and Chronic Illness Summit. I'm your host, Dr. Ann Shippy. And next, we get to speak with Dr. Jocelyn Strand. She's a naturopathic physician and she is the director of Clinical Education and Research for Biocidin Botanicals.

She's specializing in the microbiome, gastrointestinal system, Lyme disease and autoimmune disorders. And she's just a wealth of heart and great information.

Thank you so much for joining us today. I'm so happy to be here. Dr. Shippy. Thank you. Well, I know you have your own personal story with mold. And I think it's so helpful to have people hear the story and that you can get to the other side and and navigate through the world again.

So it's so true. I mean, it's been for sure. I feel like molds played a very strong role in my personal journey, health Journey in part. And it's part of the reason that I landed where I did in terms of my career as well.

So they're all sort of intermingled. As is always the case, you know. But I had a mold exposure in our home that we were living in the construction, you know, around like 1980 when everything was super airtight.

And I moved in with my now husband and he had a house that could handle one person just fine. But when I moved in and started cooking every meal and there were more showers being taken and all of that, a lot of that moisture in the house was going into the attic and the softs weren't properly installed.

And so the moisture was going into the attic and then running down behind our bedroom wall, which we didn't realize until it came through.

Personal Mold Exposure Story

And I you know, I had all of these it was it was so confusing because I had, you know, of course, these bizarre symptoms. I really wasn't educated at that point.

And mold toxicity. This was maybe 12 or 13 years ago now. Yeah. And I had itching was my main like, you know, histamine of course response. But it was mostly from my waist down.

I would get like inflamed, inflamed in my legs were so inflamed and itchy that I would scratch until I bled at night. And it had that prickling, you know, that sort of passive mnemonic for mold like the prickling and insomnia, where it would just feel like electrical prickling all over my body to the point where I was laying on the couch at night crying because I didn't know what was happening in my body.

And then we then then it showed up and showed up literally, like within, I would say, an hour of installing an air exchanger in that house. I felt like a different person.

My itching was also. Although I'm sensitive to Yes, I tend to like clear it relatively quickly. And then I kind of went about my my life, my and we didn't do a proper remediation at first, you know, but we went about like.

Hardly on the map at that time what a proper remediation is. And we. Had to still look at the. Map. Enough. Yeah. Yeah, exactly. And so I, I went along with my life and then I had a patient, a pediatric patient, and she had a mold exposure.

She had tick borne illnesses. I didn't know that at the time that I first met her. All I knew she had just, I mean, a slew of type one hypersensitivity.

So allergy mediated responses to food. And she would have an asthmatic response when she had when she after she ate. And it was unpredictable and it was life threatening.

She was hospitalized with an I. V. Steroids and just tiny little three year old kind of failure to thrive picture. And I. I ran testing on her on her microbiome and would you know at that time and I asked them, what do you use for pediatric dysbiosis?

And she said, well, try Biocidin it's a liquid, you know, So I was able to do just a drop twice a day. So, I mean, this is a long story, but to make a long story short is that I watched her transform in a matter of weeks with the Biocidin liquid.

And I didn't know at that time that she had I kind of hit the nail on the head by accident. Right. For tick borne illnesses and mold and dysbiosis for her at all.

At the same time, with that product. And so I just watched her change from that sort of failure to thrive to Pink and and she didn't have any more respiratory in that amount of time.

She hadn't had any more respiratory events. She's had a few triggered. Now she's 13 or 14 years old or something. But she then, of course, I was. It's those moments that we all have in practice where we go, Whoa, I'm on to something, you know, And I watched that happen for her.

So then I tried it on myself. And this is after I'd had my mold exposure. And of course, I didn't titrate for myself. I went straight to the maximum dosing.

I didn't know what binders were. I just like great guns, you know, And I had a whole body mold recurrence when I did that. And it only lasted for, you know, less than a week it lasted.

But I was I thought, what is happening? You know, And it was just a remarkable experience to watch it unfold. Sometimes when we exacerbate things pretty seriously, we know we're on the right track.

We just need to. Modify. The approach. Like I look at those things as being a win, because anytime you can move the needle positively or negatively, you know that there's some clues there.

Yes, exactly. I mean, great clues. I think, you know, over time, I've gone from the sort of like darn the torpedoes. To. Like, how do we support really?

I was I was well supported in my detoxification of my of my mycotoxins and dysbiosis at that point. Right. I didn't I was working very deeply with my microbial imbalances are dysbiosis and most likely biofilms as well.

Right. That were mycotoxins that were housed in biofilms. And I just went after it. And if I'd known at the time to support maybe with some glutathione and some binders and slowed down a little bit, I would have suffered the same way.

But sometimes I go for the hard lessons in life, at least say to myself and not to patients. Right? So I learned through. A lot of times that our bodies are our best teachers.

Yes, exactly. And I tend to try everything on myself. And I don't know, I think. Like my family, my poor kids. You know, like, you know. They get to have their fevers.

They get to, you know, be be sick for a little while. They get to, you know, anyway, So it was. It. Was really amazing for me to watch that disappear.

Right. That sort of the ongoing illness disappear and then rise again, knowing.

Understanding the Microbiome

And that's what really what helped me understand what biofilms are and and how those microorganisms can be housed in our bodies, whether it's in the sinuses or ears or.

Some defining just so our listeners know what we're talking about. So let's just define microbiome first, and then let's do biofilm. Perfect, perfect.

So the microbiome is we have these are bacteria, it can be gram negative gram positive bacteria, fungal elements and yeast and also viruses, even parasites can be part of our microbiome, right?

And so these are all microorganisms that coexist with us. And the main reservoir is in the gastrointestinal tract. And then we have the second largest reservoirs in then oral cavity, but we have them everywhere skin, vaginal tract, the prostate as the microbiome.

And now even the bladder we know I think you're her title track does not sterile aquifer. Yes or the pulmonary microbiome right we didn't even we had no idea about that And now we know that's got a very, very strong link to how we respond to the exposure to viral respiratory, viral illnesses.

We can't exist without them like we would die without them. There they are lifeline. So there are beneficials and the ratio is very important. And when we have when we have a healthy microbiome, it really protects us in a number of ways.

It modifies and educates our immune system so that it's competent when we come across something that that's a pathogen. But on the reverse side, it also establishes tolerance.

So if you you don't get hyper, you're less likely to become hyper reactive to something in the environment, whether it's an allergy or just a reactivity.

And so it's that balance between inflammation, the gas and the brakes is how I think of it. When we have a healthy microbiome, it establishes health in our immune system and the way that it interacts.

And we'll talk more about that today I think, in our. Conversation. Definitely. So, so many other ways too, that we could go into hydration and nutrient absorption and nutrient synthesis and energy production, all of those things that are really essential when we have an essential part of a healthy microbiome.

So if that gets disrupted, then we start to it can I'm sure you've seen this, that it can eat, it can be something sort of mystifying and slow. Maybe your energy level is not as good, or you wake up with headaches or you do have a little bit of joint aching and over time and it gradually happens over time or it can be very dramatic.

Right. And I think of an acute infection as really microbial dysbiosis. But it's it's a very powerful dysbiosis. If we get an acute infection. So sort of how I think about the bugs on the body.

Yeah, that's great. And then biofilm. So biofilm is an interesting one is definitely something that I learned once I was in practice. I didn't hear anything about it in medical school.

Yeah. It's more so more of those of us that are actually delving in and looking to see what's going on in the research that are even aware that it's a it's an important piece, right?

It's so important. Especially I think when we're working with complex illness like mold illness. So biofilms are generated by almost every microorganism.

It's I call it like an invisibility cloak. It's a it's a protective mechanism for them. They can hunker down and hide behind a biofilm. They can have beneficial microorganisms, but they can also house pathological or harmful organisms.

And if you don't address a biofilm, then antimicrobials you take or antibiotics are less likely to have a good effect

and they can receive. So I think, you know, in kind of easy terms, it would be to think about, well, the first thing is the easiest biofilm to identify is that fuzzy teeth feeling so fuzzy to go to a plaque as a biofilm.

You know, every time I say that, I think like I mean, our our toothbrush bristles have biofilms on them. Hopefully they're beneficial microorganisms, but there are pathogens that.

If you've got rid of canals or cavitation, that may not be the case. So periodontal disease is the most common inflammatory illness globally, which is really interesting.

Half the population has some either inflammation in their gums or their periodontal area, and those bugs produce, you know, all sorts of kind of bad, bad things in in that down in the periodontal pocket or the biofilms are place.

So the reason that we can see it so easily on the teeth is that it's a non shedding surface so the biofilms can hang out there, our teeth aren't consistently shedding the surface and so they they can establish a house there like where we have biofilms in the gut or on the skin.

We're consistently shedding our epithelium and so we can definitely get biofilms there. But it's not quite as dramatic or easy to identify. To identify. Yeah.

The sinuses tend to be another one that it's easier to identify. Yes, exactly. Sinuses and ear infections in kids. That's another one where I mean, kids who need repeated antibiotics, that's usually due to a biofilm and a number of different microorganisms that are master biofilm producers.

And they just stay in there. You take the antibiotic for a little bit better and then slowly they regenerate. Not even that slowly they regenerate from behind the biofilm. So all I mean, if you'd asked me or if you told me, you know, when I was in medical school that I was going to specialize in microorganisms and the microbiome, I would have been like, you know.

Who is not your favorite class? No, what's my favorite class? I need you here. And now. I'm living. It right, Right now. I know way more about bugs than I ever thought I would, so.

But it's such a powerful access for us as clinicians for offering healing to our patients and for us to educate ourselves on an end. And it's a relatively straightforward support, not not for everyone, but for most people.

It's pretty straightforward to tweak and support the microbiome so that it's healthy. Yeah, Well, so let's talk about how mycotoxins affect the microbiome.

Okay. So this is kind of in depth. I went round and round about the best way to to delineate this because and it's all, it's all intermingled. So we'll talk about the, the mycotoxins themselves and how they the influence that they have.

I have a few notes just so I don't forget any of it. So the first thing that happens when we get a mycotoxins exposure, we all get mycotoxins exposure all the time.

And primarily unless we're in an environment that has mold and our main source of mycotoxins is our food. So that's part of the reason mycotoxins. But other anything that we get from the outside world, why our gut is so heavily policed by our immune system, we have lots of protective mechanisms.

We have a good health, strong, healthy mucosa there. When we get a mycotoxin exposure, it's really the prolonged exposure that over time will cause dysbiosis, meaning that the beneficial microorganisms that do all of those wonderful things that we just talked about start to diminish over time.

And the pathogens start to reproduce instead. And so we get we lose our healthy balance R ratio and microorganisms that work were what's called commensal or sort of just existed, coexisted in our bodies, start to become opportunistic instead and they start to reproduce.

Primarily the worst players are gram negative bacteria like Klebsiella. I mean, again, I never knew I'd be able to list make a list. On a gram of. Different gram negative bacteria, but.

Klebsiella is one that when I do the stool testing on patients with the detailed PCR testing, that that is one that's very commonly creating imbalances.

So that's a good way to mention. It's interesting too, they're one of the main so they're gram negative. That means they produce lipopolysaccharide, which is very toxic.

Biofilms and Hidden Infections

And so it is the most potent immune stimulant to the human body known right now. So if you can imagine if that's if that's over or growing and being released a lot, that our immune system is going to be inflamed or overactive.

And so that's that's one thing. Klebsiella is also a major biofilm producer, so they'll hole up and produce a lot of biofilms. And then I think of biofilms, they're so sticky that they're used to bioremediation, toxic waste sites.

So of course they're going to hold onto and house every toxin that floats by them as well. So it is a source of ongoing source of toxicity as well, those biofilms.

So when we get those mycotoxins, the bad players start to rise, the small we lose the protective activity of the beneficial. We'll start to see again that sort of it can be low grade and gradual where people start to feel disruption and it can show up in their gastrointestinal tract, but it may just show up as fatigue, inflammation, you know, not feeling or cognitive impairment.

Yeah, some of those symptoms that you were experiencing with your sleep and with that feeling all over your body, I think that's probably, you know, impacted by these toxins as well.

I'm sure. I'm sure. And and that's just one way, one way that might go. Toxins affect the microbiome. So they also they are antimicrobial and that's part of their mechanism for activity is that they kill the beneficial.

But they also with that production of those metabolites, they do not only do they increase inflammation, but they are what's called a pathogen associated molecular pattern.

In there it's a pump and that goes immediately to the liver for clearance. But that is very, very toxic to the liver. The liver, the cut for cells are the immune cells in the liver come in to get rid of or to destroy or dismantle the pants.

And that causes damage associated molecular pattern. So it becomes a feedforward cycle. And then our hepatocytes are the the cells responsible for detoxification can't do.

And they get they get congested I guess is what I would say. Our liver gets congested where it can't do its normal level of work. And the reason this is important is because these are mycotoxins.

Right? So God, it's a weird, I think an unusual intersection of the microbiome and toxicity just mycotoxins it is both a microbial agent producing a toxin and it's just part of our total toxic load are mycotoxins.

So it's just an interesting but it all becomes enmeshed. It's a vicious cycle, right? Yeah, exactly. And the other thing that happens with when we get a prolonged exposure to mycotoxins, even a single exposure, it causes damage to the lining of the gastrointestinal tract itself.

So damages the epithelium or the cells that line the gastrointestinal tract, and then we lose our ability to protect or keep out and sort of police the area as well.

And we know that as leaky gut. Right. Or intestinal permeability. But that's another direct action where Mycotoxins will then affect the way that our our intestinal linings interacting with our microbiome, the existing microbiome, we're

looking at increased likelihood of reactivity to foods and to other pathogens in the body or microorganisms that wouldn't typically be considered a pathogen or our body wouldn't recognize.

All of a sudden, it's got a much larger fight on its hands. When we have a leaky gut. Yeah, everything quit quits working as well as it should for all the things that the mucosal membranes are supposed to do for us.

So then that's again, that's also summarized like how the microbiome helps us to deal with the mycotoxins. Yeah. So when we have a healthy microbiome, we have there are a number of protective mechanisms in place.

So we have well, the first thing I think of is those beneficial, are responsible for beneficial microorganisms, are responsible for the production of anti-inflammatory mediators.

So things like short, they're called short chain fatty acids. I think most people know beta eight the best, but there's AC, they're acetate and propionate.

There are a number of other short chain fatty acids and those have the systemic anti-inflammatory effects. They also feed and have antioxidant effect in the in the colon and the gut itself.

And so it's a really essential part of us being able to have healthy colon function. And it's that over time it will reduce our total inflammatory load and, you know, I think we live in a culture where we think I'm just going to take an anti-inflammatory.

But really these basic ways, foundational support offers us over time. You know, this is establishing a healthy lifestyle, right? And establishing a healthy body is how we stay in balance and have this long term reduction in inflammation rather than having to take, you know, I mean, I think some of those supplements are very beneficial anti-inflammatory supplements and it's also important to support our.

Ability to do it, to. Optimize things, not to just keep the bare minimum. We need to get to the root cause of the inflammation and exactly is to augment our.

Yes, exactly. And, you know, not have a need for things like ibuprofen or other assets. You know, or which are. So hard on the microbiome. So intestinal lining like it like I, I really try to get my patients to only take those if it's something super acute and it's going to be a very short period of time.

And yes, you really try to not to use them. And it's kind of shocking when we look at the usage, you know, worldwide, how many people are taking these medications and not realizing the impact on their bodies.

The direct impact rate on the gut lining, like you said, is right where we're talking about today is that, again, that barrier function that is essential in the gastrointestinal tract.

It I think I read an article it was a while ago now that said that a single dose of ibuprofen will cause damage to the lining of the gut. And of course, I always think it's like, you know, our skin, if we get a scratch, it will heal itself.

But still, you have a little bit of exposure at that point. So imagine over time, like you got to stop scratching the wound or Yeah. Yeah. So okay, that's one way is that it helps us with, with short the production of short chain fatty acids and beneficial metabolites, it also modifies the mycotoxins.

So when we have beneficial microorganisms, when it mycotoxins, when we consume a mycotoxin, it will basically neutralize the toxicity of the mycotoxin.

I didn't know that until I read the literature. So fascinating.

How Mycotoxins Disrupt Gut Health

But the flipside is also true that if you have dysbiosis, it can take it's it's called a masked what is it called? Masked

Mycotoxins is what it's called where they're not damaging.

And we see this too in detoxification, right? There's a substance that we get exposure to, whether it's a mycotoxin or another toxic substance. And if we have dysbiosis, then we lose the protection of the short chain fatty acids.

Then we'll start to see this conversion into a more type, more toxic, even more highly toxic substance than than what we originally consumed, which is very problematic.

You know, again, we're talking total toxic load. And that's so that is also one way that the microbiome interacts with mycotoxins Beautiful. So I think you've done a great job of really making this intersection between Mycotoxins and the microbiome and how it all works together.

And you know, when things are really balanced, it's all like we just our bodies can deal with it. But then as the toxic exposures increase, it gets harder and harder for this symphony between our, you know, our cells and the microbiome cells that really to keep things in and to balance.

And yeah. I think of it like even a workout, you know, that you can do you can your endurance is one thing I can do so much, right? But there's a point at which your body can no longer, you know, lift, lift the heavy weight and it's a total energy expenditure and strength issue.

And the same thing happens in our in our physiology where we we can't at some point homeostasis or the ability to maintain balance is overcome by sort of the hits that we take.

And what I love, and I'm sure you've seen, is that oftentimes I, I would say to my patients it's not we don't have a three legged stool. We have like a seven legged stool.

And we can our body can take so many hits. Right? It's so our bodies are so smart and so capable of regeneration and healing that sometimes, you know, you imagine if you have seven or eight legs and it takes you have to go down to two before the stool starts to fall.

Right? And sometimes it only takes one in restoring one and the body will be able to write itself around. And I've watched that happen. It's not to say that we can't support all seven legs of the stool, but it's to say that sometimes just restoring one's one thing, like the health of the microbiome or you know, getting inflammatory foods out of the diet or getting hydrated or getting it, removing stress or whatever or whatever it is for the for the individual will make a huge difference in their ability to to manage all of this.

And that being said, we still need to support the as complete detoxification of mycotoxins as we can. We don't want to be always like on that on that line, you.

Know. The tipping point. No. Yes. As far away from that as possible. Yeah, I feel good, but I don't feel good. I feel good. I don't feel that. That's not that's not where we want to be. Right.

But yeah, to you want to do a little bit of explanation about the fungal issues that people can get into with, with mold exposures. I would love to talk about that And it's something that happened for me specifically as well, is that, you know, mold and and yeasts and fungal elements, they have a very similar protein structure and people can get and I hope this is what you're after.

But yeah, is that people tend to get reactive to all of those things at the same time. So where someone an example for me would be a patient who didn't have any issues with, you know, if they ate sugar or if they had an alcoholic beverage or that they would feel fine, you know, the next day.

And someone, once they get a mold exposure and become hyperactive, it can become very reactive to yeast in all of its forms and get very inflamed from those things.

And also their blood sugar will then feed things like Candida or other fungal elements. So candida or yeast, it's a

normal flora in the mouth and the gut.

It's one of the main produces of biofilm in the mouth actually, and in the gastrointestinal tract, especially people who've been on a difficult health journey and been on a lot of antibiotics.

Yeast will naturally be overgrowing and can cause fungal overgrowth there. So any time that you run into a mold exposure, you can get more reactive to or even get a yeast infection from at that point because the body reacts in the same way to to all of it, even if it's just naturally existing yeast, you can get really inflamed wherever that yeast is naturally existing because the body is coming in and trying to clear.

And you see that, like I would say, at least 90% of people have no idea that they have these fungal overgrowth situations. Like I think a lot of times, especially in women, they think, Oh, well, I don't have a vaginal yeast infection, so I don't have a problem.

And they. Yes, right. And they don't realize it. Where do you see it on the. On the. I, I think most of the time it's in the digestive tract and then doing the testing like a note test or, you know, some of the stool fungal fungal tests, we can actually find it.

But see what's in there. It usually takes testing because it's the symptoms are just kind of lost in with the other symptoms that people are having for mold exposure and other things.

And they all look so similar. And I had this conversation with Bryan Carr of Do you know Bryan Carr? He's the mold guy. He's just an amazing wealth of knowledge.

But I did a podcast with him on a on the same topic and, and I don't remember what I was. Going to say. So that's. The topic on these low grade fungal infections that are.

I don't remember I'm sorry. Stealthy. That's okay. Yeah, I'll let you get it. Is there anything So I think you've done a great job of laying the foundation of like, what the problem is, why it occurs, this intersection between the microbiome and mycotoxins.

Is there anything else you want to do to lay a foundation before we get into solutions? I don't think so. I think the piece for me that I that I think is really important is that sort of gut liver access piece with Mycotoxins.

And I think I think I feel like I've already talked about that a bit. But just to clarify a little bit more what we're talking about, they're great, which is that if there's a if if there is dysbiosis that will increase are just that will increase our the load that the liver has to carry.

And I know I talked about Lipopolysaccharide a little bit, but I love to talk about that more that those gram negative bacteria as a general rule are maybe commensal, but usually they're opportunistic and can become pathogenic and some of them are just straight up pathogens or harmful and LPs.

So LPs is is it's called endotoxin. When we get a rise in our blood levels of of LPs, it's so toxic. And if you get a cut and it's infected with a gram negative bacteria, that is what causes sepsis and septic shock.

So Lipopolysaccharide generates a huge inflammatory response in the body. And so you can imagine that if they're, of course in the gut, all of the blood flow surrounding the gut, all of that goes directly to the liver and it is prioritized.

It first pass in the liver that LPs is. So when we get that dysbiosis, it's a really important aspect for supporting detoxification in general, but especially when we're dealing with a lot of hypersensitivity and a heavy toxic load from a mold exposure as well.

So in the flipside is that the the, the liver, when it releases bile acids, when it's healthy, it keeps our microbiome in check. So we have good bile acid function and release in the small intestine.

And again, it's that bidirectional pathway. That's what it acts. That's the definition of an axis. So that we need the healthy functioning of the liver, we need the healthy function of the microbiome.

The two of them interact with one another and you can see the same thing happen with the conversion of toxins from the liver by bile, a by the microbiome.

If you get this virus, the increase in toxicity and the reabsorption of toxins that your liver is already trying to clear and is trying to overtake and recycle.

Yeah. Yes. Yes. And so making again, making sure that you're supporting the beneficial microorganisms. And one thing I forgot to mention, too, is that a lot of those beneficiaries will bind the mycotoxins in their cell wall.

Supporting Detox and the Liver-Gut Axis

So as they're reproducing and dying off in your gut, they bind those mycotoxins and then we excrete them in the stool instead of them causing that inflammation.

And so again, just making sure that you're maintaining a healthy microbiome on multiple on multiple levels is super important. Since they have little suitcases that they're carrying with them to. To take out the.

Trash. Right. Or a lot of. So if they're not there with the little suitcases, then then the body is having to really recycle things a lot, lot more. And it's like massively increasing the toxic load.

Right. And we want to especially today with the, you know, the way building structures are and the potential for exposure to toxic mycotoxins, but also just total toxic load in general on the planet.

I feel, you know, we need to support our bodies in in every possible way. And this is a it's a pretty powerful way to do that is just to support that that healthy microbiome.

And then the use of binders, you know, I think I don't know. I'm sure you're I'm sure you're fluent in the use of binders, but that was something that I was missing in my practice and I caused harm, you know, to my patients by doing a detoxification without adequate support.

And you lose their face, you know, and you lose their trust and they don't get to heal. If you just feel like when you when you do that stuff, you fast causing damage.

Hopefully it's not lasting damage, but it can cause problems with the kidneys or the liver or other organ systems as well. So making sure to support the body's excretion while you're doing that.

And it's so lucky. You know, when I got I got a at least like symptoms from mold in 2009 and when I tried to take the coli. Stier I mean, the only thing that was out there was, you know, one specific approach to take colleagues. I mean, it actually made me sicker.

Oh, my gosh. So but I knew I just I knew I needed binders, so so that helped me to to get up to speed on my own body before I started taking care of patients.

And, you know, I learned the hard way. But yeah, I know, right? So was like that let me be able to see and practice and. All those things so can hold that space.

But the boundaries are tricky, right? Because some people can get sicker from certain binders and that and so then it takes some courage to keep trying them.

I'm the one doing the right doses and the right ones for for your particular. I think it probably is somewhat dependent on the microbiome, what toxins are, you know, working together in the body and all of that.

And and it can also change over time. So there's a little there's ongoing trial and error to to figure it out. So interesting. Yeah, that's not something that I'm as tuned in with as I could be as that reactivity to binders.

It's in my head. A binder is something that's going to make people feel better. You know. And it also it is because it it's, you know, helping the suitcases get checked out.

But yeah, every once in a while and it's so tricky. So I'm always just cautious with it. So do you use dry? Just one at a time then? Okay. For most people, like sometimes I'll get a feel.

Okay, this is a robust person. We can just go for it. And then in the more sensitive, go a little slower. That's so interesting. I mean we've had I've good success clinically having people use binders before they ever bring on any kind of anti-microbial or clearing even and drainage support as well.

And I think drainage can be super powerful. But again, it can aggravate if you don't do it right. So it's it's. Takes it takes being tuned. In. And back to your stool analogy, it probably depends on each person's legs of the stool.

And you know, what's what's really the out of balance the most. And I think you get a lot of intuition though with each person after having. Yes. But let's let's kind of give an overview.

So we talked a little bit about binders. What are some of the other things that you find are helpful with your patients? Well, so. With. If we're talking I love what you said about the individual and intuition, I feel like, you know, I think it's really important for us to bring that into our.

Into. Our patient population. So I don't know if you can hear my dog barking in the back. Okay. Okay. I got to put her away. So join the conversation.

Yes, apparently so. I think, you know, if it is someone very sensitive, safe hands or pandas or mold exposure, a chronic Lyme patient, and so often you'll see all of you know, many of those crossing over with one another.

I mean, I think people with Lyme who are already inflamed are much more prone to be really aggravated by by an exposure to mold than, say, someone who's like you said, robust, robust health.

But with those, there are a couple of things that were game changers for me with with those with that patient population. One was realizing that we can't just drain the vital force like what drainage techniques and binders and all of that.

We have to restore the vital force as well. What I used was by and I'm not being this isn't like. This is just. What I use. I'm not paid for this for talking about Pocono, but I use their drainage remedies pretty extensively.

And then they have a couple of products nitrogen and EU dash are and I'm pretty sure I'm saying it wrong because they're strange names but that was from a sort of Chinese medicine perspective is as a chief restorer.

So it brings vital force back to the patient. And when I, when I started combining the reinvigoration of a vital force with the drainage that allowed and a lot of my very complex patients to continue to push forward with therapeutics that would help restore their physiology, meaning getting getting those mycotoxins and the dysbiosis, whether it was gut dysbiosis or I think I also think of Lyme and Epstein-Barr and all of these other chronic illnesses as low grade illnesses as dysbiosis.

To me it's all become that, you know, it's an imbalance in the body. A lot of times the healthy body can just nip it all in the butt. Like I think there are plenty of people that are carriers for Lyme that have no illness.

Exactly. Associated with it because our immune systems are keeping in check, just like we keep the chickenpox virus in check until our immune suppressed and then we get shingles, right?

Yeah, that's exactly how I think about it too. And I live in northern Minnesota, which is one of the highest endemic

areas for for Lyme and tick borne illnesses.

And and so it is something that I ended up having to find my way through. You know, our patients help kind of guide that that path. But so I always started with binders first and drainage and then I would bring in antimicrobials and in that includes so I use bio side and then I work for biosafety for full, full disclosure, but the like.

So we would clear the gut with the liquid first to help reestablish balance in the microbiome in the gastrointestinal tract. And then once people are sort of good to go with their gastrointestinal tract, I would graduate to the liposomal form of the bio side and which is more bioavailable.

It has in the research that in vitro research it had better 74% better intracellular absorption. The liposome does so it would go directly from then from the mouth into the bloodstream.

You don't lose some of it when you go through the digestive process and the liver kind of clears parts of it. And so that but it has to be very gradual if it isn't robust person.

You know, we all buzz right through all of that and people feel better and it's pretty easy to support them. But for people who are really sick, we might also bring in things like or I would bring in things like gluten found like I'm a gluten and other antioxidants, vitamin C, LIPOSOMAL, vitamin C, and I would say the drainage were sort of my foundational.

And then just depending on the individual and where they needed additional support, whether it was in sort of mechanical function of the digestion was often also needed support, right?

Hydrochloric acid or bile acids or pancreatic enzymes, that sort of thing as well. So I don't know, that was kind of vague. Yeah, that was well, that's okay.

So let's step through it. So first was getting the vital for lymphatic drainage, then binders. So with the binders, what do you like.

Treatment Tools: Binders, Drainage, and Botanicals

Well I use the GI detox, so the bio side and botanicals is so bio side in itself is the flagship product and it's a it's a broad spectrum, meaning activity against bacteria, yeast, fungal elements.

And it's a formula and it's sort of I mean, I think Dr. Fresco just happened upon the fact that it's got 18 botanicals in it. So and it's, it's a very potent drop wise dosing and so what's, what's cool about that is that it's very well tolerated in these very sensitive people because you can do you can titrate with tiny doses, but also there's no like heavy hit with oregano or, you know, it's like each one is just the tiniest amount.

It almost seems like homeopathic in itself. Which makes a lot of sense because no, it's not going to be that particular for the good organisms versus the bad.

So you end up wiping out some of the good ones too. So this approach to have small doses of synergistic. Yes. In herbal plan makes a lot of sense to me.

And I love botanicals and part of the reason I love them as well, I love the earth. And I love. What I feel like. It's it's been put here for us as a gift To me.

That's how I feel about it, is that we've interacted with these plants for all of human history. Our body recognizes and knows how to work with them, but so do the microorganisms that we like on our bodies.

And so we do have research showing that the beneficial is are not depleted by bio saving. So it's. So. Important. It's so exciting. You know, it's like it's sometimes seems too good to be true, you know.

But when we. Got the results back, we were all like, oh, my gosh, you know, So some of the beneficial is actually went up, not statistically significant, but that what we were about to prove was that it didn't suppress beneficial microorganisms and it did not do that.

So very, very cool. And so I find myself in this place of gratitude that I have this tool in my toolkit to work with the microbiome. But it also clears mycotoxins in some case studies that we have.

So not just whether it's whether those are mycotoxins, we don't. What we don't know is, was that housed in a biofilm or was it, you know, is it an ongoing exposure?

Where how do we identify it? That's a little bit more complex. But we do have before and after testing, showing clearance of mycotoxins with the use of the bio side and liquid.

One doctor used it in a nebulizer. I can't recommend that because we haven't studied it for safety. And I just want to point out, like so many supplement companies out there don't do their own research.

And so that's this is one of the reasons that I love bio site in and I use it often in my clinic is because there's data, there's research to back it up.

It's so nice as a clinician to know that I can stand behind what we're saying, the claims that we're making and what and how we talk about the product and this and that we can.

I mean, I'm a geek. So like, what can we study next? I love it. So, so this was a roundabout way of getting to the binder, which is also a formula. And for that reason I think it has.

So it's activated charcoal. Zeo Like citrus pectin know apple pectin excuse me and human can folic acid and aloe. And that. For per reports. Is much more well-tolerated by most people than some of the other single binders are.

Or binders that don't have aloe. That aloe can help prevent the constipation that some people experience when they use a binder. And so that's the binder that I've always used, it's the one I work with.

I think as clinicians like, it's easy to get kind of in a rut. So probably I could look at some others, but that's the one that I that I use and that I love.

So that that binder, even when you open the drainage pathways, you know, with, with the drainage remedies, the homeopathic drainage remedies, you still want to be binding.

What's being released from the liver, from the lymphatics through the kidneys, all of that. We want to be binding wherever we can to save them trouble of having to reabsorb and reprocess those.

And so the binder, that's the binder I would start with the drainage and the binder and then bring in for for most people they could just go straight to the the anti-microbial and the binder, you know, But for our very sensitive people, I would then very carefully titrate with the biocidal liquid starting at one drop a day and working up slowly, you know, to to maximum dosing which I think is, you know, on the label it's seven drops twice a day.

I would sometimes go up to 15, drops twice a day with my patients with really large patients, sometimes 20 drops twice a day. I would go to you for the.

One of my favorite bio cited products is the throat spray. And yeah, I totally just ignore with a max dosing on the bottle because yeah, it just I don't I've never seen a downside to it and it's so great for helping to fight up the respiratory infections and including the main one that we've been dealing with the last few years.

Yes we and that's something we hear a lot of in our you know, in terms of on our clinical line reports is that it's the same saves the day. Yeah it goes like multiple bottles go with me on every trip.

I haven't stopped traveling through this whole time. I've just been on the go the go and and so I have extra for family and friends and. I know always pack an extra ride because someone's going to need. It.

It's like I got everything it took. I took four bottles with, you know, knowing there's been an uptick again recently, I took four bottles with me and I ended up giving them all away.

Do you really? Oh, that's hilarious. You've got great stories around travel and all of that. I really enjoyed when you came on our webinar and shared some of your experience has been it's I'd love to pick your brain sooner.

Okay, I'll definitely. Follow up on all of that. That sounds like. Anything else you want to share about it. Tools in your toolbox to help people recover.

To give hope. I just I, I love the tools and the toolbox that I get from for bio in and in other ways. It's really great to hear. It definitely gives me a lot of purpose on the planet to bring this research and bring the clinical information forward and to do, you know, to to read and learn and then share all of that and report back.

The one thing I would say that I sort of left out, I referred to the oral microbiome a little bit, but the the oral microbiome. So we have about 300 on average microorganisms that live in the mouth, which is significantly smaller than the number of microorganisms that live in the gut.

But we swallow a liter of saliva a day, which is gross and interesting. And it is where we have, you know, antimicrobial peptides and all that in our saliva.

We have, you know, it's it's all designed that way. Our immune system is in our saliva as well. It's all designed that way for a reason, but we have ten to the eight.

So 1 billion microorganisms in a milliliter of saliva and we're swallowing a liter a day. So if someone's having a difficult time getting, you know, getting full healing, it's really important to to address the oral microbiome.

One of the things I love about the liquid is that you're also working in the oral microbiome when you use the Biocidin liquid, which is why I always use the liquid instead of the capsules in my own practice.

So I mean, we sell a lot of the capsules, but it's for me, I feel like you're missing one entire important niche. So we swallow that. If we don't have good stomach acid, those microorganisms will go right through our stomach and establish themselves in the small intestine or in our gut.

And we want the good guys there. So you think of Candida again as one of the main microorganisms.

Oral Microbiome and Recovery Hope

The Porphyromonas gingivalis is the gram negative bacteria that lives in the mouth, produce it constantly producing lipopolysaccharide. So there's that bad guy again.

But in my head I thought, Why? Why is it so important? Why is P gingivalis, or Porphyromonas gingivalis related to things like Alzheimer's disease and cardiovascular disease and cognitive dysfunction, all sorts of inflammation, including autism, joint pain or autoimmunity, when there's such a small amount in the periodontal pocket compared to the gut.

And then after doing the reading, it occurred to me that we don't have the first pass through the liver. We it all goes all of that translocation of the lipopolysaccharide hides in the periodontal pocket. There's just that.

The adjacent blood flow is so close it's only a single cell layer that those toxins, basically endotoxins cross directly into the blood flow. So it's just another source of another therapeutic target.

So, yeah. And that's true for any of the, you know, the metabolites that are that are difficult for our body will go

directly from the periodontal pocket into the bloodstream.

And if you have bleeding gums, you actually have transient septicemia, so you'll have it transiently, you'll have actual translocation or movement from of the pathogen itself into the bloodstream.

The body clears it, but it's just something to think about as a part of the whole digestive tract and microbial dysbiosis is to make sure and include the oral microbiome.

And you can do that with Biocidin liquid. There's a there's a toothpaste with Biocidin in it that. Can be of the toothpaste. And now we. Have a we have a.

Kind of a fresh new viscosity on it. It's it's been really we've gotten a lot of thumbs up on the on the newest version. And so. Yeah so it's just something something to.

Make somebody take care of your oral microbiome. Do the prevention so that you don't get any of the gum disease or and I think it also probably reduces the risk for cavities when you've got a healthy microbiome in the gut.

I mean. It definitely, definitely so that there are microorganisms that are very closely related to cavity cavities in the mouth and there are oral probiotics and there are antimicrobials that you can work with to, to diminish those those back clears in the mouth as well.

So this is neat. This is such a wonderful resource of information and giving more hope for recovery and healing. It's just amazing to get to delve into this.

I mean, it's just a critical topic for all of this. Like you've got to get your microbiome right to be able to have a healthy body. It's thank you so much for having me.

And just in terms of hope, I can share one story that I had a man who we are working with. He had Lyme disease, but he also found in the course of when we were working together, he pulled his dresser away from the wall and there was mold growing on the wall behind his dresser.

And then he he was on the main level and he had a crawlspace underneath it. When he open up the crawlspace space, it was just completely coated with mold, mold growth.

And he he really wasn't that was an obstacle to his healing. And once we identified it and worked with his mold toxicity, he went, you know, he got better with the other therapeutics before we were focusing on mold, when we were just focusing on Lyme disease.

But as soon as we cleared the mold for him, he he called me three weeks after we started the therapeutics. This was the neurogen that was so remarkable.

And, you know, there was another one of those moments in practice where he called me and he said, I'm 90% better. I mean, in three weeks it's like, you know what?

We all why we're here as practitioners, right, is to is for those moments when we can watch a person's journey. And I and it really most people can get can get well with this.

Support so. Absolutely 100% believe that when you get that important piece of puzzle puzzle pieces for each individual that it's like that third leg of the stool, the body just knows what to do.

Exactly. And so you but you're we're far from each other. You have to figure out which conference we're going to next. Yeah, that's right. That's right.

Well, thank you so much for the wisdom, the experience, the heart that you bring. And I know that you're in a really good spot to help a lot of people.

Thanks so much, Dr. Shippy and all of the same things. Right back to you for you for bringing your wisdom forward and in your heart forward on all of this.

Appreciate you. Appreciate you. Thanks so much. Thank you.