Psychobiome And Mold: How Biotoxins May Be Destroying Your Gut And Affecting Your Mind Transcript

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Introduction and Dr. Jill's Background

Hello everyone and welcome to the Microbes and Mental Health Summit. My name is Dr. Miles and today I have the pleasure an opportunity to interview Dr. Jill Carnahan. Dr. Jill has been an amazing inspiration for me and many others in the functional medicine space.

And we're talking today about microbiome and mold how biotoxins maybe destroying your gut Dr. Jill. I'd love for you to share a little bit about your backstory, how you got into this or whatever you'd like for an intro before we dive into the meat of the material today, – You got it.

I always love story because it kind of allows us to understand a person and why they do what they do. And I was in I'll go real briefly through the first part, but in medical school at 25 years old in my third year I was diagnosed with a very aggressive breast cancer. I had always lived very healthy.

I grew up on a farm, you know, lots of things going for me. So it was a very big shock and that was my first education and um you know how to heal from something very serious, really life threatening at that time.

I always say, you know, I was with a young group of young women under 40 and I'm the only one who survived. So it really shows you breast cancer and young women is a whole different diseases, incredibly aggressive and deadly and I fought for my life I did three drug chemotherapy, I did radiation, I did surgeries and about a year later after my medical leave I got back to school and was considered in remission, which is also a small miracle. But just six months back into school, I started having weight loss and abdominal pain. And I was shortly after diagnosed with Crohn's disease. We're gonna talk about the gut.

So this is relevant because what happened is a lot of the my genetics predisposed me to this autoimmune inflammatory reaction in the gut lining. So I was already predisposed. And then you throw that talks Chemotherapy, which also saved my life but was toxic to the gut lining and created more intestinal permeability. And so therefore these microbes escaped again.

We're going to talk about that today into my bloodstream, created an immune response. And all of a sudden, six months after my cancer treatment commenced, I developed an autoimmune disease of the gut, of course Crohn's disease.

So once again I was in the battle of my life and I had to really dig deep and find answers. And I was told by my gastroenterologist, this is back in 2002.

So, 20 years ago, that diet has nothing to do with it. And I remember just thinking that can't be right and that was my deep dive. I had already been into more integrative kind of holistic mindset, even though I was in conventional medical training.

And that was my, I guess my catalyst for me going deeper into diet and gut connection in the microbiome. And over the ensuing 20 years, I really become an expert on the gut, partially because I had to deal with and heal myself from Crohn's disease and it was told to me that it's incurable, like many autoimmune diseases are, but I just, I happened on something that I call this reversible autoimmunity and what this is the fact that when we do the work like the gut microbiome and the interface with the immune system, we can actually reverse the irreversible, which is what I did with my Crohn's disease. So that was the pre story I got out to Colorado started the functional medicine clinic was going along just great with the wellness healthy, I was running happy thriving. And 2013, Boulder had a massive flood of epidemic proportions and my office was part of that and the next year I started having symptoms, rashes, immune dysfunction show, breath, brain fog, you name it and you probably know where I'm going.

I had a lot of mold in that office and unbeknownst to me it was completely sabotaging my help. So once again I had to figure out the answers and I kind of accidentally became the mold expert through that scenario because I had to heal myself from that toxic mold, which we call biotoxins as well exposure.

So that kind of laid the framework of me really trying to dive in and I understood these things on a whole different level because I actually had experienced them.

– Yeah, yeah, that's amazing, beautiful story. Quite a journey you had through cancer plus autoimmunity plus mold illness and that's a lot to deal with.

And that 2013 flood, I was in Colorado as well. I was living in a little mountain town called Jamestown.

Cancer, Crohn's Disease, and Reversible Autoimmunity

It totally destroyed the town, I was helicoptered out a couple of days after I was waiting up there, the roads were destroyed, couldn't get out, helicopters came, I could take one bag and fly and then I wound up, I moved a couple of places because I couldn't be in my home and I wound up in a multi environment myself and then I had to get out of that. So I totally understand – You really know more than anyone, like you totally get writing a book about, people were helicoptered out, you were one of those, oh my God, those people listening, I mean there's been some other natural, many natural disasters were not unique, but it was very significant, wasn't, I mean it was, they call it the 1000 year flood because it was such a devastating thing. They talked billions of dollars of damage.

It was just unbelievable. So you have probably a little ptsd around that – Lots of damage and with the stats on mold in homes in general, let alone after a flood. It's really under appreciated how much damage was done. I'm curious, you can talk just a little bit about those stats that might be interesting for people. – Let's do because this is so relevant with hurricanes and you know, more and more natural disasters and fires and all.

And even it's interesting you might think, well, what is fires have to do with floods? Well, there's massive fires on a area near Boulder. Say for example, then all of a sudden if there is an excessive rain, the water is going to run without anything to stop it.

So it actually, they do connect when there's damage from the fires, it increases the risk of the runoff and the erosion of mountainside towns and things and causes more damaged by floods. And both of these things, it's interesting because we also had a massive wildfire last year in my town of Lewisville Superior that took out about 1000 homes. I say this because it's kind of related to bio toxins and air quality. What we're seeing is biotoxin illness and mold related illness massively affects the air quality through mycotoxins.

And so do wildfires. This was kind of a lesson to me in the last, like I said year because what I saw was the same kinds of lab abnormalities that we see with mold with wildfires, wildfires now, sorry, tangent there, but you were asking about statistics, there's at least one in four homes in the US that are affected by mold and more recently, I've heard a statistic as as much as one in two.

So it's really, really prevalent and it just goes to show like if I'm in the office and I suspect mold related illness in a patient, I almost never say, do you have mold in your home? Because you know what the answer is gonna be, unless they just got remediation like no, right. No one thinks there's mold in their home.

Let me tell you a story that just happened Dr. Miles, literally I'm in a condo, a lovely condo, fairly new build, never had any issues of water damage and as you can imagine, I'm the mold expert. So I checked my drains, I clean my like I do everything to protect my environment.

And just about two months ago I heard a clicking on the fridge and that led me to look behind the fridge and I ended up finding an old water leak that had some Kotomi, which is one of the worst of the worst. So just literally a month ago I finished remediating here. Everything is good now.

But I was starting to have the same symptoms and be like, this feels like mold. But I'm in a new condo and that's

what someone who like literally knows almost everything there is to know about mold.

My one takeaway here is don't connect the water line to your fridge. It's too big of a risk. You can make your own ice cubes. It's not if you have more sensitivity, but these kinds of things.

So things like under the sink sink leak that you think is no big deal a shower that's not properly cocked cocking and tiles are not always impermeable to water.

So it's often we see a builder didn't put a water barrier behind the tiles or the grout is perceived as water and permeable and it's not so even in showers and bathrooms, things like if the attic is not sealed, there can be condensation of course any intrusion into windows, any sort of weak at all. And it's so common that you have to ask these kind of questions, washer dryer leaks, dishwasher fridge.

Have you had it? Because most people like, oh yeah, the basement sump pump flooded but we just dried it up and it was fine. But you know, and you know to when you hear those kinds of stories there can be mold lurking and can grow after a couple of months or even years and cause severe damage to the human body. – Yeah. Recently I had a patient, I asked you suspect any reason from multi said no ran it hurts me on her basement.

32 was the score, there was stack each Tony. It is not good. So with that stat and I had read that stat to about as much as one and two American homes water damaged and you know, we think America while we're having these build qualities that are higher and it seemed as though and correct me if this is because I read something that said it wasn't it wasn't disproportionately a lot more in the humid places.

Like people might think it was fairly evenly distributed. Is that, am I correct there? – This is absolutely true. Dr. Miles. I love that you said that because so many people think, oh Miami or Louisiana or some of these hot damn, it's hot and humid, damp places would be the most problematic for mold.

But the truth is Arizona, which is dry California Colorado. Just as much of an issue. In fact, like in Colorado, I heard a statistic from a ra mediator. The number one source of issues is crawl spaces.

So you don't really think about your crawl spaces, it's sealed. And all of this is about the building envelopes or whatever building you're in. It's like how contained is that from the exterior environment or from the internal walls or anywhere where there are your crawl space. So if your crawlspace happens to vent into your house in any way and there's like damp, either materials or water standing, that's going to be a huge risk because that air flow can go into your house.

So part of the issue with crawl spaces, us actually sealing them off from the internal house. And part of an issue with any home is whether it's the outlets or the lights like the can lights from the attic actually making those seals. So they're air tight and they're not exchanging harmful and toxic air. One other stat I love is 80% of our environmental toxic load is from the air that we breathe.

That shocked me when I heard it years ago. And now I love to repeat it because we think of all the food that we eat or, the you know water that we drink all these other toxic exposures or maybe heavy middle in our amalgams or. But the truth is the air that we breathe is the thing that we aren't even thinking about is probably our biggest exposure.

And I know I see in my clinic now that I'm aware of mold so often someone comes in with a new M. S. Or autoimmunity or lupus or Crohn's or they come in with brain fog or early onset Alzheimer's, all these things that seem completely unrelated. And I would say I would even say 80% of the time I find mold as part of the issue.

– Yeah, I agree. I find it similarly. And one of the things that I think confuses people and I'm hoping we can shed some light on this is that, well, I'm sick, but other people in my house aren't.

So it can't be the home. Can you speak about the genetic predisposition. The percentage of people who have that and a little bit too why one person or two people, but not everyone in a home maybe getting ill.

– Oh, I love that. You brought this up because it's such a confusing thing and it's something that even like insurance companies and government contracts and things use against those who are really ill because they're like it couldn't possibly be an environmental issue because not everyone is sick.

So there's genetic predispositions I like to call. These are little pac men of the immune system. They're called H. L. A. Type.

Mold Exposure, Flood Damage, and Environmental Risk

They're just our ability from through the dendritic cells of the immune system to actually sample our environment and say is there something dangerous in there? This is very prevalent in the gut.

So very relevant relevant to your summit here. But often what we're doing is we're sampling so say for example in your gut you eat corn and potatoes and then you get some salmonella from some chicken and your body literally stamping okay corn androgen, no problem. As long as you're not sensitive maybe gluten, oh gosh this person does have a gluten so that your body is always sampling like pac man as you put stuff in your gut or as you breathe stuff in your immune system is protecting you and checking out what's coming in. So in someone who's genetically susceptible to mold their little pac man they're H. L. A. Types have difficulty tagging the toxins that are created by mold. We have multiple wars and the multiples create micro toxins and the micro toxins which are invisible smaller than 2.5 microns, which is about the size of a virus? They are the things that do the damage.

So our body in those who are susceptible like myself, we can't tag those and eliminate them from the body. So they accumulate in our tissues and start to cause aging and damage and brain issues and cognitive Mastel issues.

You name it. So the difference is there's about a quarter of the population who has more difficulty with those pac man in tagging and identifying these dangerous strangers.

– Yeah, thanks for sharing that because that really helps because a lot of people discount it and even practitioners and as you mentioned, government organizations so so far we have that there may be as much as one into american homes with water damage, that some of these natural disasters and climate change may be increasing that as we go along here and that even new builds, even new homes can have issues and that it's not just humid places, it's everywhere where this can be an issue and that there's about 80% of toxin exposure, that's environmental and that some may be genetically predisposed and others not. So that's a lot for people to sink in and digest that. And so how do we test?

How do we know if someone has a biotoxin or mold related illness? They're sick, They're feeling maybe some of the symptoms you said like early cognitive decline or an autoimmune condition or chronic pain or chronic fatigue, something that they're not sure could toxin be involved.

How do we go? How do you go about testing for this? – Yeah. So the first thing is free and I always like to go for free advice. You could do this at home.

I would say has created a timeline. You can do this with your doctor, you can write in a journal or on a piece of paper. But one thing that's really helpful in environmental illness or environmental toxicity like mold, is to just think back and think about, when did you last feel well?

And then when did you not feel well? And often there's a time where I moved. I got a big stress. I went through a divorce. There could be a psychological stressor that could be an environmental trigger.

There could be a change environment, There could be a change in your health for some of the reason. Maybe you had just had surgery. But if you put a timeline and kind of major events in your life from the mental, the physical, the environmental and you can often put together a story of o back in 2008, I felt great. But when we moved in 2009, I didn't and that can give you a lot of clues as to the cause of your illness.

So it's a classic functional medicine timeline. But that's really helpful and it's free. And most doctors, if they're good,

they're gonna ask the questions to take you through your history and kind of get that information with you.

But you can do it yourself. Second thing is online, there's some free options for visual contrast testing. This is not perfect and it can indicate other problems so it's not unique to mold, but it is a visual contrast is the perception of light and dark lines by our retina and it involves some of the smallest blood vessels in our body.

And mold. And biotechs is affect the vascular charity the ability of those capillaries to deliver oxygen to the tissues. So we can actually see changes in the retina in the ability to perceive light and dark lines through the visual contrast study. And they used to use this in the 19 forties and the armed Forces to see if they're exposed to chemicals.

So it's a well known test. I think Dr. Shoemaker made it famous with mold. And it's a great screening tool. It does not diagnose anything. But you can do this yourself, we do it in the clinic at our clinic, you can do it online for free and actually check to see if you have issues with visual contrast and that might be another thing pointing you towards mold.

So those are two things I love because they're free now you can do a lot of testing. But like we said, I just want to review symptoms that might make you think about that is especially if you like our at home versus the workplace for example, I just got done telling you about a month ago I remediated from some nasty plutonium and for several months I noticed I always felt more clear and more awake, more alert at the office than at home. I had better days.

So there was always a difference and I started to suspect something. That would be the kind of clue that you might see is in different environments. One you feel well or you go for a five or 10 or 14 day vacation and all of a sudden you feel the best you've ever felt and some of your symptoms go away.

Those are the kind of clues that you think about with environmental biotechs and illness. You can do lab testing. An easy thing to do is urinary mycotoxin testing. Once again, this isn't perfect.

So I don't like for people to hang everything on this test because it's an excretion all test for the mycotoxins you might have been exposed to or that are in your tissues through the urine. It's very easy test to do.

But it doesn't always indicate a recent exposure because if you have, you know, infection in your sinuses from fungus or mold or your gut. You could be excreting mycotoxins even after an exposure and if someone's going through a detox, say they just got out of the mold environment and their detox, they might actually go higher levels in the urine because they're excreting it, which is good. So that excretion.

And then lastly, there's a lot of blood tests. They're usually kind of advanced cytokines, Things like T. G. F beta and MMP 9 80 H. Osmolarity, veg F. These are all complex cytokines.

You probably need a doctor to order. Although there are some direct to consumer labs that will do these and they also need some care with interpretation because it's more of a pattern when most or all of these are ab normal you think biotoxins maybe the issue, but each one of them by themselves will not diagnosed.

They won't really diagnose direct mold related illness, but that's kind of the the flu and you mentioned before, but I just reiterate the top two symptoms of mold our brain fog or cognitive dysfunction, especially word finding. So you might say cats and a dog or have trouble remembering your neighbor's name. And the other thing is fatigue.

So those two are almost always involved in mold related illness. – And since we're speaking in this summit, a lot about mental health concerns which aside from brain fog and word finding and fatigue, which mental health related conditions or symptoms may be pointing to or have a component of biotoxin illness through, – Okay, I love that you weren't here because I've got some really important things to say maybe the most important thing because it's obviously related to something, but in general, this is a big one. In my experience I started feeling like multiple personalities. So it was almost like the different assortment of micro toxins by each mold for example, Staggie batteries is known to be a black, really toxic mold. It often causes really, like for me personally kind of like depressed down dark like hopelessness and I'm not that person by nature. It's like, it overtakes my ability to see the

light and it's a very, again, this is just personalities my impression.

But I've seen that with patients, we've even seen suicides, homicides, kind of serious, serious things in patients that are affected by something like black mold Kotomi is has this personality of kind of affecting like the basil dilation blood pressure, I call that the narcoleptic mold, which means for me it'll make me like literally need to lay down and fall asleep. Like it's like sleeping beauty, just boom, I'm out. But as far as the mental health effects, I literally did studies when I was writing my book and I saw that there was a chemical effect through the nose into the proper form played into the brain direct into the limbic system or the hypothalamic pituitary axis causing a trauma response like a chemical, This was even someone who's, you know, done the therapy has great support system has no major issues with like feeling traumatized mold or chemicals them themselves can literally cause a trauma response through the limbic system. So even if again you have a great support system, you have no known trauma which we all do.

But even in that case this chemical effect on 100% of patients that I have seen is real and what that means is you might have unexplained anxiety, unexplained, overwhelm unexplained fear, especially if you had an exposure, you know what that means for your health and then you have a re exposure.

Genetics, Susceptibility, and Mold Testing

So one of the quality of this is in order to heal from old. One of the things I found to be incredibly helpful is trying to deal with that limbic decoupling so that when you smell the mold or see the mold or go to a hotel with mold, you don't go into that trauma response and again you can know logically I'm gonna be fine, This is no big deal, I've overcome it before, but if you don't unhook that traumatic response that was coupled with the first chemical exposure, you're gonna just physiologically Phil trauma and then your brain and heart and everything else react.

So like I said, anxiety, insomnia, overwhelmed, super common, the cognition is impaired and there's insight insight means the ability to see in real time what's happening and understand it and in my experience and most of my patients inside is very, very impaired, which means I can be an expert on mold and know how to treat it and everything about it and still get a mold hit and in the midst of that first part of the mold hit, I'll be like, I don't know what's going on, I don't feel well, something's funny, I'm confused, I'm overwhelmed and later maybe the next day, the next month or the next week I will be like, oh that was mold, but in the real time it just sabotages the insight and the understanding of what's actually happening. So it's a very, very bizarre thing, severe depression, severe anxiety and then also in the realm of schizophrenia, bipolar psychosis, hearing things, all those kinds of things can also be manifestations.

So you talk about the realm of mental health and mold is right there as a cause of almost anything you could describe. – I love that you bring up trauma and that you bring up that limbic system direct impact and that you bring up multiple other aspects of mental health because I think there's this feeling as if trauma is really this emotional thing and it's missing this understanding of the physiological aspect of it. And I think a lot of the post traumatic research is all on events and circumstances that are externally emotionally impactful but not on physiologically impactful things like environmental toxins and infections, which is part of what we want to educate about in this Summit and that I find to be incredibly important as I'm sure you do brain retraining limbic system retraining, finding a way for people not only to deal with the toxin impact but also to directly go into the trigger response that's already been ingrained in the brain and create a new response to the same trigger and reprogram that or rewrite the story internally about that.

So do you find that people get better results in working with mold illness if they're also doing brain retraining limbic retraining activities and practices in addition to doing some of the protocols that are related to the toxins directly and getting rid of the toxins.

– Yes and I would go a step further. I feel like it's the first step in healing and it's like non negotiable. So I love that we're talking about this because I don't always talk this deep on this level, but it literally I realized um and again my own journey, that horrible exposure in 2014 after the mold and I didn't understand this back then.

So I did have a trauma response and then for years after again you get in a multi hotel, you get an exposure and

you kind of even if you knew you'd be okay, like logically you're like I'll be fine. That limbic system and tell you uncouple it, I called uncoupling because it kind of connects and causes and what it does is it almost compounds like you might have had an old experience as a child, maybe near drowning or some other traumatic experience and it accentuates in couples old trauma. But what happened again, I tell my story just a few months ago because I had massive, the worst mold for me is Kotomi.

It was in my kitchen in my house and I could have gotten like all stirred up again and I realized this time I've done hours of NLP hours of limbic retraining, I've done so much work around this and this time I was living in it during the whole remediation and all of a sudden it was like I had no fear and no trauma around it.

It was so different and this exposure was very significant to my health. Like I could tell the fog and the brain and the fatigue and stuff, but there was a very different experience than five or 10 years ago because I didn't have the fear around it because I had done the limbic work and what I realized is, gosh, this is the key because as we said, one and two buildings when you, if you want to travel, if you want to do an Airbnb, you're gonna be exposed to mold, it's guaranteed. So you have to have understanding and limbic decoupling around this or you're gonna always be living in fear and always getting triggered – And we know from the studies on PTSD that there is a generalization that can occur where someone who's, for example, the one that everyone knows is in wartime.

If there's a gunshot and a traumatic like a friend dies or something like that, then there's this sense where sometimes loud noises in general, like a car firing or someone yelling or a loud noise in the environment that has nothing to do with a gunshot triggers because there is a generalization that occurs for loud noises and sounds. And so if we look at how this can occur, this generalization in relation to mold illness, this could generalize into being unsafe in multiple different environments and you're always going to be in a home or an environment of some sort. And if there's this limbic triggering around being in doors, that's going to potentially generalize to become an ongoing limbic response that's almost constant or continual for people, do you find that – 100% you've restated it so clearly and what I love the word that you said is safety because what I've learned and this is why Olympic retraining is so important to mental health and the connection to this safety, feeling safe in our bodies is absolutely essential for healing period, no matter who you are, what you've done, what's happening. And I think that people who are most stuck in illness have some sort of a signal or subconscious program around safety in their body and this is very related because if you, if that has subconsciously triggered through your, you know, chemical smell into the brain anytime you smell mold or notice mold, even if you're not conscious of it, you're gonna feel an unsafe response in your body and when you feel unsafe you can't heal. So this is so, so important. And I love that you mentioned safety because at a core that's really what it is, is is letting your body know and doing the work around that to know that you are safe, you're gonna be okay.

– Yeah, I know we're going a little different direction than we had initially talked about. But if you don't mind taking it a layer deeper, I'd love to actually speak to a bit about have you speak to a bit about the aspect of that? If someone is starting to have this physiologic response, this limbic response, we're talking physiologic here because perhaps consciously you don't feel stressed about your environment, you can think about it and it's fine but physiologically when you go in there, things are happening in the body and I want people to understand that difference that there might be that.

Well, I'm not upset about, like I feel fine about my home when I think about it, but we're not talking about that. Exactly right. We're talking actually about physiologic changes and how how can people discern that physiologic because if someone says, well I manage stress okay.

And I can think things positively and I can I can maintain that attitude that's positive and despite of the challenges that I'm having, how can people tune into the difference of that physiologic stress and limbic dis regulation that's occurring from the conscious being able to maintain a positive attitude.

– I love this, Oh my gosh, I love the direction we're going. Because I grew up as like an analytical, I was bioengineer background and I used my head for everything that was my coping and it's a really good mechanism.

You can figure things out, you can analyze, you can see pattern recognition. The deepest work around this area was was when I started somatic, experiencing or going into that intuitive heart space because my body was

different from my head and that and I hope this makes sense to your listeners.

You can think about, oh, I'm fine, oh, I'm okay, but your subconscious or your physical body doesn't feel okay.

Mental Health Effects and Limbic System Trauma

And if we, we kind of, I always say I used to live above my neck into my head, but I just would like, shut up body, like I might feel something but I got so disconnected from my body that if it was and so how you do this as you start to tune into the sensations, oh, my stomach's gurgling, Oh, I feel a little palpitation and you can actually, like just check in, I would close my eyes and put my hand on my heart and my belly and check in and how I started the work was actually listening to my body and trying to feel and you know what's funny. There's this left brain analytical side of us but the right brain is wordless. It's emotions, it's feelings, the sensations, it's pictures, it's not words.

So often you'll be like trying to logically explain, oh my heart's a little racier but how you actually tap in is like listening to your body and just checking in and actually becoming aware of the sensations that are happening. Because those will clue you in.

So for example you might be like I'm fine, I'm great, there's mold in my kitchen but I feel okay but you actually feel your body and you realize my heart rates a little bit up, I have a little bit of heartburn.

Oh I felt like a queasy feeling in my belly and and so and again you might want to get professional help. You work through that. I'm not the expert here. But I've done work with experts and you start to touch base with your body because your body just like the body keeps score which is one of my favorite books on trauma and many of the others they start to, you start to tune in the body won't lie, you can lie here but they won't lie here.

So when you start to tune in to those sensations and number one acknowledge them and then number two you can do breath work, you can work with NLP you can do E.

M. D. R. You can do brain spotting. There's a number of somatic experiencing therapies and you probably know way more than I do on these but you start to experience and so what I did is over the last 56 years I dropped down from my head into my body and that's where the healing on this level takes place because you actually create a sensation of safety through the change through breath work through the change through subconscious like programming.

And these things really really do make a difference because all of a sudden your body won't hold that trauma or those sensations and that's where the knowledge lies on this level.

– That's amazing because cognitively and there are cognitive practices but a lot of people have done cognitive work and feel like I'm good in terms of my ability to manage my thoughts space and my thought stream.

But when it comes to sensation in the body sometimes it does get ignored. Sometimes it's or there's a little bit of just lack of awareness of what specifically is happening. I remember I played ultimate frisbee in college and someone was sitting by the sideline he was saying oh I'm gonna just go relax here by the sideline and one of us through the frisbee and it went and hit him and he was like I'm just trying to relax here and like it was sort of this obvious thing of like oh he didn't realize how much was going on internally. So sometimes it's a lashing out other times, it's a dropping into becoming subtly aware of the qualities of the sensation dropping the story, the label of the emotion that I'm fine tuning into.

Is there a slight tension in the throat? Is there a constriction or heaviness on the chest? Or does the chest feel light and open and expansive? Does it feel like there's a weight?

Does it feel like there's our marine, Does it feel like there's a wall or does it feel like there's this emanation of love and a lot of people don't have this sense that normal and healthy. Is this emanation is heart coherence.

This emanation of love as what we all naturally are in that state, if there's not something preventing that. And so can you speak a little bit about what is the natural, like if someone is tuning into the quality of the sensations, what would be healthy because a lot of people might not know that.

– I love this. So it's interesting because I remember a conversation with a friend who's around my age maybe a couple years older and we're walking not too long ago in boulder and I remember her saying, you know Joe I recently read a book about depression and one of the ways that they helped you to deal with. It was like giving you a number scale with where like one is I can't get out of bed, I can't function in life 10 is like, I am so happy. Life is amazing, like as good as it can get maybe slightly you've work.

And she started talking, she said, this is the first time she was a recovering alcoholic and have been sober. But she understood that mood scale and she was telling me, she's like, as I read that it clicked and she said, you know, Jill, I've never been above a six and I think like a five was just like able to fake it, but totally almost on the inside not doing well, four is like not even able to fake it.

You know, I'm not able to go to work and then of course on down and then I thought about that. I thought, well it must be like happy most of the time.

Nine must be like, like really happy. Of course 10 is like, And I returned, I said, really? I said, you know, I think I live life like 8-10 all the time and that's the other extreme, right? But what I realized in your question about the heart is when I'm in that space and granted I've had my ups and downs too.

But naturally that space, if I just tune in and ask to like describe what does that feel like, what does that body feel like when it's in it, literally, I love that you use the word love because I just want to give and love and share and like, um there's so much love coming from that place and there's so much not just love, but you expect good things to happen. You expect not just for me to love people who I come in contact with, but I expect good that love right back because it's like this and I hope I'm being clear and how I say that some of these things get so esoteric, but it's, it's almost like a euphoria, a slight euphoria where you feel like, wow, I can't believe how lucky I am and there's a lot of gratitude there too.

So love and gratitude and we know these two emotions if they beget each other, which means if we, if we don't feel that if they were like a four or a six, like my friend was saying she never experienced that we can actually change this by choosing to journal and our gratitude journal or to think loving thoughts of a pet or a loved one or a family member. We can actually change that because as we start to create and choose love and gratitude, our heart coherence will raise and will raise ourselves from a six to an eight. And then it kind of reinforces itself because as we feel those emotions, they create more emotions and what happens is energetically when we put that out into the world. We are, I tell you people all the time, I'm the luckiest person with parking spots and all kinds of things, but I know that it's partially as crazy as it may sound.

I expect I go somewhere and if I need a parking spot, I'm just like, it's gonna happen. I know it's gonna be amazing, I can't wait to see what happens and all of a sudden the park and I'm like, there it goes again, and it's a silly example and you may think I'm a little crazy, but when you expect or you expect people to treat you kindly and you treat them kindly, it really does. That energy just begets itself.

And when you're in a down spot, it's maybe hard to get there. But you can start with love and gratitude because we know from the science that is a coherent place for a heart and body and it will create in the universe more of that in our lives. – And I love that you say we know from the science because there is very clear research on gratitude.

There's very clear research and part of what it does, I believe is the mind compares where you're at, to a lack of that rather than looking at a goal of where you want to be and comparing it to where you are. And so a lot of people live their lives, especially in this culture, looking from where you are at the bottom up the hill towards where you'd like to be, oh, I'd like to be symptom free.

I'd like to not have trauma. I'd like to not have anxiety and I'm at the bottom. I'm looking up, it feels not good. There's a subtle tension in the body. If you tune in subtly, there's this feeling of attention, that's a negative tension.

But if when you take gratitude and you compare where I'm at to a lack of that, I have shelter and there could be homeless or another person, there are people who are homeless, I have food, there are people who don't I, even if I'm tired and fatigued and feeling not where I want to be.

I'm not bedridden in a hospital and I'm not struggling to get out of bed. There are other people who are bedridden in the little or struggling to get out of bed and to have that sense of gratitude for where I'm at instead of me being at the bottom, looking up towards where I'd like to be now, it's actually, I'm somewhere in the middle and there's this sense of that.

Somatic Awareness, Gratitude, and Decision-Making

It's okay where I'm at, there's actually some gratitude, some peace and contentment and then I can still have those goals, still have that direction that purpose without it feeling so daunting or being at the bottom.

So there's this feeling that gratitude is well researched to help bring up that sense of where you are right now with things as they are without changing at all.

– I love that. And here's a really simple tool for your listeners. I always think am I in love or fear? Like it's so simple because almost any decision situation mold for example, and as crazy as that sounds like, oh thank, I'm so glad I found this.

I learned more things that could be a loving attitude or they could be like, oh my gosh, I'm gonna die. And and almost always if we go to either checking in with ourselves, are we in a place of fear or love?

Those are very energetically impactful for our bodies. And the other p pearl is expansion versus contraction. So whether it's a decision about work or taking a job or doing something this afternoon or taking on another project or whatever thing you can always just like check into your body.

And so does this make me feel or a friendship? Does this make me feel expansive or contracted. And if you just touch base with that simple word and it's pretty easy to tell when something expands you versus contracts you and I literally make all my decisions on fear and love expansion and contraction. – And that's fantastic you're going into decision making strategies because that can become a thing that people really struggle with.

So the somatic based decision making strategy can really inform about the heart and what the heart is feeling. So we just have a couple of minutes. I'd like to tie this in a little bit if how how does this tie in a little bit to the to the gut and the microbiome and and and what can people do as starting points other than the fear love, Which is a great starting point already.

– Yeah let's get practical because we got on a tangent but I loved it. And so what's interesting is in some cultures we talk about the heart and the somatic place.

Many cultures called the gut the same thing. So I think this is relevant because that gut microbiome has more D. N. A. More content than our cells of our body.

So there's a lot going on in our gut that affects our brain. And we know from studies that the vagus nerve is one of the things that like the highway between our brain and our gut as far as our mood, our emotion and the signaling pathway between our microbiome and our gut. So some really practical tips for um for listeners as far as how to have health that affects the brain and mental health.

Number one, a clean diet and always say clean air, clean water, clean food. So you can start really simply what that means is make sure you have air filters in your home or you don't have mold, you're making sure that's clean air, clean water, filtered water, spring water, some source of water showering, bathing, drinking cooking that is clean and uncontaminated. Number three food and food affects the gut.

So often an anti inflammatory diet if someone doesn't know what they're saying sensitive to or isn't sure you can do

an elimination diet, the top thing is gluten.

So all you do is take out gluten. It can affect your mental health. 50% of gluten affects the gut in something like celiac or non celiac gluten sensitivity, but another 50% affects the brain. It can cause insomnia, fatigue, anxiety, depression, you can take out gluten and again that affects the microbiome in a healthy way. If you're sensitive, if you want to take out more than one thing, dairy gluten, sugar or the top three and there's a lot more you could try corn and soy and pea, peanut and sugar, alcohol. But at the core gluten tends to be the biggest trigger between the gut and the brain for someone who's suffering from symptoms.

And then as far as our microbiome health, that's why I said clean food because you need to plant based lots of fibrous material to feed and increased diversity of the gut microbiome.

So for example an anti inflammatory diet might look like um limiting processed grains, limiting sugar, limiting alcohol, no gluten, no dairy, no sugar.

It might look like lots of plant based fibers, leafy green nuts and seeds fibers material like psyllium flax chia. So those are all kind of a healthy part of a healthy microbiome and our microbiome diversity, which is the main factor indicating our health and resilience is not going to get there by a probiotic, it's going to get there by your diet.

Gut Health, Microbiome Support, and Closing Resources

So diet has to be first, but for practical reasons you can take a probiotic and I'm a big fan of spore probiotics and I'm a big fan of bovine, immunoglobulins and butyric acid.

Those are a few of the core things I find to heal. A and as we talked about at the beginning with my story, when you have permeability or the tiles that line the gut wall, have some permeability of the grout, then all of a sudden you're going to get inflammation, you can get brain effects, you can get mood effects.

So healing that liquica is a great step towards wellness. So in summary probiotics are great, but food is first, spores are the best probiotics, limiting inflammatory and toxic foods. And trying to eat whole foods whenever possible. – I love that.

Thanks so much. And then going back all the way to summarize from the beginning, we have stats around environmental issues with one in two homes potentially as much as that being water damage, climate change.

We have issues with 80% from the air. So doing that air as well as water as well as food are really important things and then looking at the limbic system, looking at the trauma response and not just attributing the trauma response to all the emotional triggers. Looking at the physiologic and the somatic aspects, looking at love versus fear. Looking at expansion versus contraction.

I love this now. You have a book that's coming up and I just was released actually. So tell me more about the tell our listeners more about this book because they may want to now hear more about what you have to say.

– Thank you. Well, it's funny because I had the idea about eight years ago about writing a book on environmental toxicity and then I got into it, I realized I have to tell my story because as you just heard, I've been through a lot. So the book is a really unique, it's called unexpected and you can find more at readunexpected.com.

It was just released. So get your copy. But the bottom line is it's a memoir is the story. But in that story, my hope is that you see yourself reflected and you see your journey.

And the other part of the book is a tons and tons of practical sidebars on how to heal from mold, how to find out if you have mold how to do the somatic work, how to deal with trauma, how to deal with Crohn's or colitis or autoimmune disease, how to enhance your gut microbiome. So, you're going to get a great story.

But right alongside that is some really practical information just like the stuff we discussed today. – Well, please

check out Dr. Jill's book, unexpected and how can people get in touch if they want to find out more about your clinic or blogs or other resources that you have accessible to people?

– Yeah, so my website is just Jillcarnahan.com It's all kinds of free info and that's the best way to connect with me or on instagram at Dr. Jill Carnahan. – Fantastic. Well, thank you Dr. Jill.

It's been a pleasure. Thank you everyone for tuning in.