

[182: Resiliency Radio with Dr. Jill: Fungus Until Proven Otherwise \(FUPO\) with Doug Kauffmann](#)

Dr. Jill 00:12

Welcome to Resiliency Radio with Dr. Jill, your go-to podcast for the most cutting-edge insights in functional and integrative medicine. I'm Dr. Jill, and in each episode we delve into the heart of functional medicine, into root healing and transformation, exploring frontiers like gut microbiome health. Today we're going to talk about fungus with one of my new friends and experts in the world, who has been doing this work for decades. Let me introduce him and we'll get right into the show.

Dr. Jill 00:36

Television show host Doug Kaufman was trained in emergency medicine by the U.S. Navy as a hospital corpsman in the late 1960s and served in that capacity while attached to the Marine Corps in Vietnam in 1970. From '71 to '98, his clinical nutrition and research work elaborated on a discovery he had made linking certain types of fungi, especially aspergillus and candida, to ill health and many diseases of Americans. He had a very successful radio show wherein he referred to the successes he had had with the doctors he trained and worked with when he had used this discovery of antifungal medicine to help sick people who were told that there was little hope. And again, we have lots of things to talk about there, Doug.

Dr. Jill 01:20

Wishing to educate more than one patient at a time in the clinical setting, in 1998, he launched a television show titled *Know the Cause*, and that's where I got to know you, Doug. Soon after, it was in demand, and he and a physician co-authored 13 books on the subject of fungal illness and co-authored an important paper on the ability of fungi to induce human cancers. This was in *Oncology News* in November 2014. I think we connected over [how] I'd recently taken some of that research and written a couple of blogs on it. I could say so much more, Doug, but first of all, welcome to the show!

Doug Kauffmann 01:55

What a blessing! Thank you so much for having me on!

Dr. Jill 01:56

You are welcome. I have followed your work for years, probably decades, because I've been in functional medicine for a little over 20 years. As we talked in the beginning, you know a little bit of my story from the book about the breast cancer. I have a special interest in this cancer-fungi connection. And I don't say this a lot publicly, but now I can finally be very open: Fungi with Crohn's and with cancer was a huge, huge part of my illness, as you so well know. Let's go back, though, before we go into my story or your experience. Tell us, how did you get into this? How did those doors open and did you discover that fungi and fungus were at the root of so many chronic illnesses?

Doug Kauffmann 02:38

This healthy 20-year-old, Doug Kauffmann, goes off to Vietnam. And [as] corpsmen, we're surrounded by Marines out in the field. We got our medical pack, IV bags, and so forth. I came home a year later and had some bizarre [experiences]. I worked with Dr. Everett Hughes at the USC Medical School on the ninth floor. I'm telling you, Dr. Jill, I couldn't ride the elevator up if anyone else was on it. And I couldn't fake it. We didn't have cell phones back then. I had to listen to music. My hair started falling out in the back. I had horrible stomach problems and what I would call anxiousness. Along with that, maybe some stuttering and so forth. My brain was moving quicker than my mouth. And I couldn't figure it out.

Doug Kauffmann 03:25

Dr. Hughes one day said to me, "Doug, you didn't eat raw fish in Vietnam, did you?" We corpsmen [were to] graduate in a few months and get to work at a hospital in Da Nang. The people that would clean the Quonset huts with us were some of these wonderful women who would bring their meals in. Nuoc mam is raw fish and rice. They gave it to us. I said, "Yes, Dr. Hughes, I did." He said, "It sounds like you have a parasite." I'm telling you, I went to the library. We didn't have "Hey, Siri." I went to the library and opened a book and it fell open to a chapter—it was a 1953 parasitology book—that said, "Yeast and fungi parasitize man." I had horrible jungle rot, which we are told is a mycobacterium. I think they behave more like myco than bacterium. But I thought, "I wonder if this yeast could have gotten through to my bloodstream." I didn't know how that would work, but "maybe that's what's wrong with me."

Doug Kauffmann 04:30

"Stop drinking." Dr. Hughes, I'll never forget him asking me, "What do you eat?" I said: "I eat bologna sandwiches. I eat Oreo cookies. And I eat Coors beer." I'm 21 years old [at the time]; I'm home from Vietnam. Months later, after I read this book, I said, "I'm still having some problems with this." He said, "Did you change your diet?" I said, "Yes, I did." And he said, "What do you eat?" I said, "Now it's salami sandwiches, oatmeal cookies, and Budweiser beer." Like most people, I didn't get it. [When he had told me prior], "You have to change bologna sandwiches," I thought, "Well, salami sandwiches are good."

Doug Kauffmann 05:05

Then I began to understand that fungi—unlike bacteria, viruses, and protozoa—must eat once inside the human body. There are localized fungal problems—ringworm, vaginal yeast, etc.—and there are systemic fungal problems. I had a bad one—systemic. I finally stopped drinking beer and doing everything. I lost all my friends and stayed home Friday night, and I felt great. Then I would go through that phase, as many patients do: "Well, it's Friday night. I'm working in a hospital. I should be able to go out with my friends and have a couple of beers every Saturday morning." I'd feel miserable again. My stomach—I was just feeling miserable. So I got it. I changed my diet.

Doug Kauffmann 05:49

But beforehand, I studied and was introduced to, in the 1970s, a diet that made sense to me that a young person at that time, an old person now, could adhere to and still feel pretty good. I knew we needed some carbs. I went through all of that. I was at the time working in an allergy clinic. He gave me the job instead of a nurse because I was trained in emergency medicine. Sometimes we see anaphylaxis in an allergy setting. So I worked with these patients. Dr. Jill, if physicians will begin to close this [points to his mouth] and open this [points to his ears], these patients will tell you everything.

Doug Kauffmann 06:31

One day, an engineer came in and said, "I don't need your allergy shots anymore." I said, "Why?" He was holding a white bowl and he said—the guy is like 35–40 years old—"My mom ages milk and if I take a tablespoon of this twice a day, I don't need allergy shots." I said, "That's ridiculous, Tim, because the sinuses are up here and that's the gut." Of course, we've learned a lot in the 50 years I've been in this. I

learned so much from these patients. I convinced Dr. Howard Godshalk—an ear, nose, and throat surgeon and practitioner in LA—on difficult chronic sinusitis to let me try nystatin. Of course, that was before the big Mayo Clinic study came out. Nystatin worked wonders. He sat me in the office one day and said, "If we put all these patients on nystatin, are we going to have a business left in allergy?" But he was a good man—a decent man.

Doug Kauffmann 07:27

Back then, we had amphotericin B, Nizoral, and other drugs. We started experimenting with his allergy patients. Unbelievable results we had. I finally opened up a laboratory dealing with food allergies because I didn't know about gut permeability caused by yeast. The laboratory went very well until one day a paper came on my desk. Let's see if I can remember it: "Antigenically Intact Good Macromolecules Exiting the Gut Lumen." "Whoa!" We were testing what people were eating. Then, after changing their diet for a week or two, they'd feel better, and then they'd feel worse again because those antigens were leaking through. I quit that.

Doug Kauffmann 08:11

When I went back into clinical work, I was recruited by a group of dermatologists in Dallas. I came out here. It was just unbelievable—psoriasis. I asked the doctors if I could put these patients on, at this time, Sporanox, nystatin, and my diet. You know what happened, Dr. Jill, because it's in your book. Over 50% of these people with major autoimmune diseases responded favorably. But not before they tell Dr. Weakley and me, "Could this have anything to do with my herpes?" And Dr. Weakley would say, "No, no, this is psoriasis." "Doug, look at my pants. I've lost 30 pounds in a month." And I had to hear this over and over and over again to understand that fungi are parasitic organisms that can get inside your body and demand to eat. It must have carbohydrates. And if you don't feed it carbohydrates, you'll go through a die-off, which you explain. You'll feel quite miserable for a week or two, and then higher than a kite. I've been giving CME talks. I don't know if you know Lee Cowden.

Dr. Jill 09:27

Yes, I know him really well.

Doug Kauffmann 09:30

ACIM. I've lectured to them and other doctors several times. Most of my lectures are on either neurotoxicology or mycotoxin induced... The nerves of your body can

be adversely affected by certain fungi—or cancer. Cancer grows in a lump. Fungi gather in a lump to bypass phagocytosis so that the white blood cells won't gather them up. There's power in numbers. Polyps, lumps, etc. I began studying [a paper that was] published in 2014 with a couple of friends of mine who were physicians. That paper opened the eyes of medical science. Some of these doctors come along and believe diet is everything and they get looked at as quacks and quasi-scientists by their peers. Robert Atkins was a good friend of mine. I'll never forget that he had a demeanor that was so great, but the medical community hated him. And eventually, he prevailed.

Doug Kauffmann 10:41

That's what I feel like. I think before I die, the consensus is going to be as this paper came out: "Researchers in US and Israel Detect Fungal DNA in Most Cancer Types Found in the Human Body." [It was] one year ago. They're finding fungal DNA and fungus in all 35 types of cancer. We're here now. We're here. I'm helping so many people, like you are. It's a very exciting field to be in. Mycology is lonely. It's been lonely for me for 50 years. But all of a sudden, it's doing quite well.

Dr. Jill 11:15

What a story, Doug! It's so beautiful to see all of your experiences and how they've led you to this great influence that you have today. What's interesting is that I think it was a huge blessing that you weren't an MD, because what happens is that I think MDs start to lose the ability to be curious. And you clearly in your story had this mark of a genius, which is curiosity, and saying: What if...? What else? What else is possible? What else could be the cause? And that's part of why you made these discoveries that a lot of doctors [miss].

Dr. Jill 11:44

For me, it was facing my own mortality with cancer at 25 and then Crohn's at 26, realizing that it wasn't even the cancer. I don't think I realized it until the Crohn's [diagnosis] and started seeing *Saccharomyces cerevisiae* antibodies, which of course are anti-yeast antibodies in the gut. Now we know that that's contributing to inflammation. And for me, it was the very same: A low-sugar diet and antifungals were a huge part of my cure and remission from both Crohn's and cancer. I'd say 80% of the cure was the antifungal piece of the puzzle. I'm passionate. And it was exciting. [With] the latest article you mentioned, I went ahead and wrote a blog about it. And it wasn't that there hasn't been data and we haven't been talking about

this for decades. But it was finally [the case] that there was a very large study that could show this, and then we could start to have the conversation with our colleagues who are a little bit unsure of what we're talking about.

Doug Kauffmann 12:38

I know, isn't it fun? We used to have fax machines. In 1999, the Mayo Clinic published that 96% of chronic sinusitis is due to fungus, and everybody's writing [prescriptions for] antibiotics, which fuel fungus. On my fax—I was with one of the doctor's patients—I heard ding, ding, ding, ding. All these doctors were faxing me: "Hey, you might be right." "Hey, you might be right." Exactly. Then Dr. Ghannoum at Case Western, a mycologist, published that with Crohn's, we had always looked at a bacterium—and we must. But also look at fungus. So this might be a dual ideological basis.

Doug Kauffmann 13:22

And now this paper came out last year [regarding] 35 different types of cancer. They tested 17,000 paraffin cancers and found 35... Once again, it was no longer my fax; it was that little guy: Ding, ding, ding, ding, ding on my phone. All these doctors are saying, "Doug, you might be right." There's no doubt the evidence is in. We must consider a fungal etiology. And here's what still frustrates me. I understand. We had to give Zithromax because we didn't know. It's not an antiviral. As a matter of fact, it's contraindicated for a virus, but we had to use that. It's so simple: Antibiotics have a dark side because they're mycotoxins. It's so simple to tell a patient when you first examine them: "I don't know if tinnitus is a fungal problem, but here's what I want you to do. I want you to go on this diet for two weeks. I want you to come back and see me in two weeks. And I'm going to put you on something; it's a bloodstream antifungal. It'll get into the inner ear. It's called," fill-in-blank—Lamisil or something like that. "It's usually used for onychomycosis or toenail fungus, but now I'm going to put you on it."

Doug Kauffmann 14:35

David Weakley twice began emoting. One day he brought me to his office and said, "You saw Julie's chart?" And I said: "No, but I saw her today. And her lymphoma is in remission." And he goes, "Doug, that lump is gone." And I said, "I know." And he said, "What are you doing?" And I said, "I don't think she had lymphoma. I think many cases are misdiagnosed in our want to help the patient. I think what she had was systemic mycosis. Thanks to you giving her sporanox"—which is now FDA-approved

for cancers—"I think that improved her, and she said her diet improved her." She lost a lot of weight. So what I've seen in my years—Vietnam was a little tough, but after that—the most blessed career you can ever imagine. People [would be] in tears. David Weakley once told Linda, the nurse, when I was in the room: "Look, I want Kleenex in every exam room now because Doug's patients start crying."

Dr. Jill 15:36

Hey, everybody. I just stopped by to let you know that my new book, *Unexpected: Finding Resilience through Functional Medicine, Science, and Faith*, is now available for order wherever you purchase books. In this book, I share my own journey of overcoming a life-threatening illness and the tools, tips, tricks, hope, and resilience I found along the way. This book includes practical advice for things like cancer and Crohn's disease and other autoimmune conditions, infections like Lyme or Epstein-Barr, and mold- and biotoxin-related illnesses. What I really hope is that as you read this book, you find transformational wisdom for health and healing. If you want to get your own copy, stop by ReadUnexpected.com. There, you can also collect your free bonuses. So grab your copy today and begin your own transformational journey through functional medicine and finding resilience.

Dr. Jill 16:34

We talked about this right before we came on. The reason why I get up every day is to inspire and change the health and lives [of others] because I know I've been given a second chance. And I know that what God has in my life is that mission to help other people understand. And just like you, 20 years ago, I couldn't say to a lot of other doctors what I was doing in the clinic, but the antifungal piece is so core and now with mold-related illness.

Dr. Jill 17:01

I have so many thoughts as we're talking. First of all, I have a friend and very well-known colleague in naturopathic medicine. I won't say his name, but he died of aspergilloma in the lungs. They did the CT and the MRI and they said: "You have cancer in your lungs. You need chemotherapy. You need aggressive treatment." As we know, here's the underlying piece about all this: Cancer is opportunistic. It takes advantage of a weakened system. Part of our helping them is getting them back strong enough and giving them antifungals to suppress that. And of course, as you can imagine the story, he gets chemotherapy, further weakening his immune system. He goes downhill. It's not touching the "cancer."

Dr. Jill 17:49

Towards the end, he died because this fungal ball was not treated appropriately; it was treated as cancer. And no one knew until the very end, when it was completely all over his body and they finally realized: "This is aspergillosis. It is not cancer at all." He passed away. And he's one of those people who, if I named his name, you'd have heard of him. In my realm, he was one of my most admired teachers. But for me, it was even more of a passionate cry for talking about this topic, going through the steps with patients, and thinking about it.

Dr. Jill 18:21

And then the Crohn's piece, I want to mention, I think it all goes together with the bacteria and the fungus. Someone like me has this genetic predisposition to have an overactive immune system for normal bacteria. Say you get a weakened immune system from cancer chemotherapy—and that's all part of the picture—and then you have a very permeable gut. You get dumping of the bacterial coatings and a weakened immune system. And then, of course, this fungus goes crazy. But that fungus is creating the permeability, which then creates this immune reaction to a normal microbiome. It's not the biome or the microbes at all. It's the fungus in the weakened immune system.

Dr. Jill 18:54

And as we talked about before, part of the secret to me—I'm not in remission, Doug; I am healed from Crohn's disease—is antifungals. I took them for decades. Now I'm on a very minimal regimen because I'm healthy. But it took me a very long time to get to the place where I was completely free of that fungal burden. But I am so passionate because that story about my mentor and my own life is all around how important it is for us to address the fungal burden.

Doug Kauffmann 19:21

I don't think his case is rare. If you look up the scientific literature, go to pubmed.gov and type in "misdiagnosed aspergilloma." It's unbelievable the papers that pop up! The treatment for bacterial infection is pretty harsh. Antibiotics are harsh on the gut, contributing to a sundry of diseases. Viruses may be even worse. But to put a patient on nystatin for two weeks and a changed diet, then come back... "I want to take your blood pressure again," "I want to do another cholesterol test on

you," or "We're going to see about your depression." I wish when I die, somebody would squeeze my head and divvy it out to doctors because I've literally seen it all. I had it like you. I didn't have it as severe as you.

Doug Kauffmann 20:17

My biggest problem at 21 was that I couldn't drink anymore. That was a "huge problem." I talked to a young man today who's got horrible gut problems. He was referred to me by a friend of mine. I said, "How long has this been going on?" "About a year and a half." I said, "What dental work did you have just before that?" He paused. "I didn't tell you that I did." "No, but I'm pretty certain you had a root canal or dental amalgam." He said, "The doctor put me on antibiotics for two weeks and since then I've had this jabbing pain in my gut."

Doug Kauffmann 20:54

"I've seen your show, Doug, and I asked the dentist for Nystatin and he said: "No, you didn't have yeast. You had a bacterial problem." So it's difficult. Yet I'm in a much better position than physicians because I'm not one. I was so angry at God. I went to Santa Monica College after I got back and used my GI bill—I was going to be a doctor. If I were a doctor today, Dr. Jill, I would be saying, "Really good news: There's a new class of antibiotics," because we're all becoming resistant because we're overprescribing. That's what I'd be doing on television.

Dr. Jill 21:27

That's why I love that you have this beautiful platform, and part of it is that God has you exactly where he wants you. For me, for many years, I've had to be very careful. And now we have enough evidence that I can talk very freely. But it's funny you mentioned nystatin. Nystatin is non-absorbable. We give it to newborn babies. It's so safe. It's one of the most safe things that I prescribe. And I prescribe it frequently because, like you, I see a massive difference in how powerful it is.

Dr. Jill 21:55

Obviously, you're educating doctors and bringing this to light. Recently, you've had a couple of testimonies. Give us an example of maybe something that you've heard lately that was a game changer, whether it's a cancer story or...

Doug Kauffmann 22:08

Sure. I have to be very, very careful. Because I'm on TV, I have FCC rules. Everything

I say must—because we do closed captions—go off to an attorney licensed in Texas who must review it, get it back to us, and approve it before I can put it on TV. I have errors and omissions insurance. It's tough being on TV. I know what I have to do. A lady in Whittier, California, called me not long ago with a lymphoma—another lymphoma case—and said, "Doug, could I follow your diet and take caprylic acid and get rid of this because I'm sick?" I said, "Here's what we're going to do." I sent her to an NMD, a naturopathic medical doctor, in San Diego, a friend of mine. I called him and said, "Can we do this?" Two months later, I got a letter from him saying: "Doug, this is unbelievable. I just got a letter from her oncologist, who—by the way, [she] does not want to know what we did—was amazed that the lump is gone and she is in total remission."

Doug Kauffmann 23:13

I didn't see that once. I see this with arthritis and diabetes. How do we induce diabetes in study animals? Bafilomycin and streptozotocin are two mycotoxins that give all of them beta-cell complexes. It blows out their pancreas. How do we induce cancer in laboratory mice? We use aflatoxin B1 and Aspergillus mycotoxins. How do we give animals Alzheimer's or other neurological problems? We give them another mycotoxin. It's fascinating. We use these for studying animals. And then the Ph.D. must go home and say, "Shh, don't tell anybody." But we need to start looking at this really honestly.

Dr. Jill 23:57

Let's talk specifically about mold, because that's my platform. And I talk so many times with patients about their mold exposure and their getting sick. And this is what we're talking about. So to be clear to those of you listening, Doug's talking about mycotoxins. Mold is something that might be growing in your home, under your floorboards, in your crawl space, or even outside. But typically, it's in more concentrated spaces. Part of the solution to pollution is dilution, so when we get outside, we have a little bit more of a dilution effect. We can still have significant effects, but it's usually more serious in homes. And these molds then secrete—because they're protecting themselves—these mycotoxins. You mentioned many of them. Aspergillus can secrete mycophenolic acid, which is an immunosuppressive. Trichothecenes have been known to cause kidney and lung toxicity and brain neurotoxicity. I could go on and on, as you could as well. But you're talking about how, in some of these studies, to induce the diseases that we

have seen in chronic America, we use mycotoxins, and therefore, these things are very dangerous. I couldn't agree more.

Doug Kauffmann 24:59

That's a good point. When I got into this field, there were probably 100,000 fungal species. Now we're saying over 2 million. We have thus far categorized 40,000 of them and discovered that a very low number, 350 of them, make a secondary poison to protect themselves. These poisons are called mycotoxins. That's not such a big deal outside, but if it's growing in a closed environment like your ducting system... Or if you think of antibiotics, the mold is *Penicillium*. We call the mycotoxin that it makes penicillin. I think we've all taken that, so we have to be careful. So that's a good point.

Doug Kauffmann 25:44

I'm sorry I get technical; I don't mean to. But in explaining it to these doctors' patients, it's really simple: "Have you had antibiotics when this started?" "Yes, I did." "Are you a drinker?" "Yes." "Do you smoke cigarettes?" Dr. Constantini told us that if you roll your own tobacco, there is no problem. If we dip commercial tobacco in sugar and then hermetically seal it, it ferments and you're...

Doug Kauffmann 26:14

There are so many things that you can ask a patient in advance—like Bill Crook did with his questionnaire—that help you discern and help them understand: "My gosh, this makes sense. The stress I've been under and the alcohol that I've gotten are way too much." It's not coincidental that our hospitals and ERs are filled because, from those little goblins coming into our homes and getting our Halloween candy all the way up to New Year's Day, we've been imbibing when we shouldn't. And people never put diet and fungus together, but they should.

Dr. Jill 26:54

Yes. Something you mentioned earlier, I think, is important. I totally agree with you. Diet is core. But then also the antifungals, whether [or not] they're prescription [medications], which I'm a medical doctor, I can prescribe. But I do use natural products and find them very helpful as well. What percentage would you say is diet versus supplements or medications? Would you say it's 50/50? Is there more of one than the other that you see?

Doug Kauffmann 27:15

It's a really good question. I had a pulmonologist in here who wrote me the nicest letter. I was a keynote speaker at a mycology meeting. Saturday night I went on, and Sunday he sat by me. Then he wrote me an email and said: "My life has changed. I do bronchoscopies for a living and my nurse used to say, "That smells like yeast when it comes out of there." And he said, "But 100% of these patients go on antibiotics." So he and I began testing them for yeast and 90% had yeast. He would go on to tell me: "Doug, I'm going to put them on antifungals. I think that's a good jumpstart. But I'm considering diet as the core, the base of this."

Doug Kauffmann 27:59

I think all that depends, Dr. Jill, on how deep your mycosis is. Some people can go off alcohol and have no problem, and they can continue eating cereals and so forth. But deep mycosis—patients are in a hurry. They've been to six other doctors. They want to get better. Give them some Diflucan and nystatin and the diet and tell them: "You will know in four or five days. You're going to come back here to our office. We're going to know in two weeks." And that's when many of them would emote. It was amazing. "Why have I gone through this for six years and none of these physicians knew that? Thank God for your book and you. You are going to change lives like you can't believe."

Dr. Jill 28:43

Thank you for that. And it's interesting because you're mentioning mucosal... Sinuses are huge. And all the ENTs are starting to realize it, and the studies have been coming out. Lungs, which are mucosal surfaces, the gut, and all these surfaces have something called SIgA, which is our mucosal immune system. I see over and over that many people have deficiencies in SIgA or impairments in mucosal immunity. And that's something that's going to almost guarantee you're going to have a little bit more trouble fighting off the yeast because you have an impairment in the immune system.

Doug Kauffmann 29:15

Would probiotics help that?

Dr. Jill 29:16

Yes. Probiotics would help. And then immunoglobulins like colostrum and bovine immune globulins are powerful as well. You are a wealth of information, Doug, and

I'm so glad you have made this your life's work. What's one last bit of information that you would like to leave people with that maybe you wish you would have known 30 years ago or the core of your work that you want to leave people with?

Doug Kauffmann 29:43

I concur with you when you say that diet is everything. It's okay to veer off, but we get used to gaining weight. We get used to lymphedema. We get used to inflammation. The watching audience right now needs to understand: If you go back to the basics—take grains and sugars and mushrooms out of your diet (although we could do a whole other show on mushrooms) and stop drinking alcohol—then you won't need to run from doctor to doctor and get antibiotic after antibiotic, another mycotoxin. I think the most important thing I've learned is that we own the key to our good health or, conversely, our bad health. And very few of us know it because our medical personnel don't know it.

Doug Kauffmann 30:36

I would be so honored to have you. We have an audience on TV that's very large in a couple hundred countries. And I'd love to host you when you get to town to begin educating these people. It's one thing for Doug Kauffmann to be saying this. It's a whole other thing for a very bright physician to be saying it. You'll help so many people in your career. I'm getting in my car higher than a kite, just meeting you. I've heard so many good things about you. Yeast isn't going to go away. It isn't going to go away, and we've got to aggressively fight it, sometimes over months and months and months like you had to.

Dr. Jill 31:17

Aw, thank you, Doug. Thank you for your work and your tireless efforts to bring this out well before it was popular. The good thing is we both know it's shifting because doctors are interested and they're open-minded, more than ever before. But I know you and I have both been going against the grain for many years and I'm excited to see that change. It is an honor to talk to you today. And thank you again for taking the time to come on the show.

Doug Kauffmann 31:38

It was my honor. Thank you so much, Dr. Jill!

Dr. Jill 31:42

You're welcome!