



Dr. Jill Carnahan, MD - 00:01

Hey everybody. Welcome to Resiliency Radio, your go to podcast for the most cutting edge insights and integrative and functional medicine. I'm your host, Dr. Jill and with each episode we dive into the heart of healing and personal transformation. Join me as I interview thought leaders, medical experts and world leaders of all types, bringing you information to hopefully help with optimal performance and healing in wherever you are in your journey. Today's no different. You are going to love this interview with Dr. Tom O'. Brien. He has been on before and his episodes have been some of the most popular ones of all time. Today it will shock you and surprise you to find out, number one, what is LPS and why it matters to your health.



Dr. Jill Carnahan, MD - 00:47

And if you're concerned about developing Alzheimer's or dementia, which is really the number one concern among most people, if you ask them about their health, you're going to find out a lot more. So stay tuned. Before we jump into that, I want to just remind you that I have products and services special curated at my website, Dr. Jill health.com and today I just wanted to highlight one of my favorite body lotions. It's called a Rejuvenating retinol body lotion. So many people are wanting smooth skin and they're doing lymphatic drainage and dry brushing and lymphatic tools and things. And a lot of times the skin integrity comes to sloughing off that old skin and getting that new resilient skin underneath. And this body lotion is phenomenal.



Dr. Jill Carnahan, MD - 01:31

I use it at least twice a week after I shower because it has the retinols which actually create that new skin. And it's one of my favorite products for the body. So check it out. Rejuvenating Retinol body lotion@doctor Jill health.com it's one of our best sellers and one of our body products versus just the face that I really find to be powerful in healing. And if you have not yet got a copy of my book Unexpected, you can find that@doctor Jill health.com as well. And if you order from our website, I will send you personally a signed copy. Of course you can get it anywhere books are sold, Amazon or Barnes and Noble or anywhere else as well. Okay, let's jump into our episode and let me introduce Dr. Tom O'. Brien.



Dr. Jill Carnahan, MD - 02:11

When it comes to getting healthy, Dr. O' Brien's goal for you is making it easy to do the right thing as an internationally recognized, admired, compassionate speaker focusing on food sensitivities, environmental toxic toxins and the development of autoimmune disease. His audience have discovered that it's through a clear understanding of how to go where you want to go and get where you want to get that you can figure out how to get to health and a longer health span and lifespan. So let's join Dr. Tom O'. Brien. Tom, it is always so fun to be with you. We travel all over the world and sometimes that's where we see each other is last year in London and wherever else. But I just always. We've had you on before and I was just talking before we started recording. They're some of our most popular episodes. Episodes.



Dr. Jill Carnahan, MD - 02:55

And I have no doubt that today is going to be another one of those hit list kind of episodes because you just bring an incredible amount of knowledge backed by the science in a way that people understand. So let's dive in. And

before we do, I always love to start if people haven't heard the previous episodes a little bit about. How did you get into functional medicine?



Dr. Tom O'Bryan - 03:17

Yes. Well, I was an intern, 1979, and my wife and I, my ex and I could not get pregnant. And I called the seven most famous holistic doctors I'd ever heard of at the time, and I asked for their office manager. It would be like calling your office because you're world famous and asking for the office manager, say, hi, I'm an intern and my wife and I can't get pregnant. I'm wondering if I can send you a check or something in five minutes of the doctor's time because I'm looking for how. What do we do about this? Would it be possible to schedule Every office manager said, sure, honey. You hold on. I'll get her right now.



Dr. Jill Carnahan, MD - 04:00

Wow.



Dr. Tom O'Bryan - 04:03

I got to spoke to George Goodheart. Hello, Dr. Goodheart? Hi, Dr. Good. Yeah, my name. Yeah, yeah. What, what can I do for you? I said, well, we can't get pregnant. And I'm wondering, okay, do you know what a Category 1 is? And I said, no. And he said, learn Category one.



Dr. Jill Carnahan, MD - 04:18

You're taking notes.



Dr. Tom O'Bryan - 04:19

Just made these quick lists and I put a protocol together and were pregnant in six weeks.



Dr. Jill Carnahan, MD - 04:25

Wow.



Dr. Tom O'Bryan - 04:26

My neighbors in married housing who had been through artificial insemination and nothing had worked, asked if I'd work with them. And I said, well, I don't really know what I'm doing, but I don't think it'll hurt you. They were pregnant in three months.



Dr. Jill Carnahan, MD - 04:39

Wow.



Dr. Tom O'Bryan - 04:39

So now we're four months pregnant. Just had to trot and tell the world of what's going on. And our friends in Chicago where I was in school, our friends would say, my sister just had another miscarriage. Could she please talk to you, please? I said, well, but I'm not, you know, I'm not licensed or anything, but they drive down from Wisconsin and, you know, and I treat people in my dorm room. I actually got called into the President's office. Dr. Tom, rumor has it that physiological therapeutics are being administered within the confines of this campus, outside of the clinic. And I said, Dr. Janci, no. We must be cognizant of legal status. Yes, Dr. Jansey. And then I just kept doing what I was doing. But that got me into this whole world. And what motivated me to make that call?




Dr. Tom O'Bryan - 05:39

January 1978, my first week in my education, and I saw that Dr. Sheldon Deal, Mr. Arizona, was going to be on campus to talk about health care. And I. Oh, a bodybuilder. Okay. The guy's really healthy. I'd like to hear what he has to say. And I went in, and the room he was in, he had a color television on a stand. Now, color televisions were new back then, and so. Oh, look at this. Isn't that cool? He had the volume off, but the picture on. Went over to his briefcase, opened up his briefcase, pulled out a bar magnet the size of an iPhone. Held it up like a police flashlight. Walked up to the color television. The picture went upside down, walked away. It went right side up. Walk towards the television. It went upside down, walked away, went right side up.




Dr. Tom O'Bryan - 06:37


And he said, that's what electromagnetic pollution does to your brain and your central nervous system. It's called neurological switching. And those are people to say right when they mean left, they write the number three backwards. They do these silly things that they know how to spell it correctly, but they misspell it. You know, it's. They're just switched. And that was my first week in my education, so I was just startled. And. Oh, my God. And so that set me on the journey that got me to where we are today.

 Dr. Jill Carnahan, MD - 07:11


Wow. I love those stories, because clearly, you and I were both healers before we knew it. And I think the divine kind of calls us by having these circumstances and things, and then your pregnancy, and then you helping the other people before you even. And it's always before we feel ready. Right. Like, I'm like, oh. So I remember that in my own journey. But it's so interesting because then as we go deeper and deeper, one thing I hear in your story that we've talked about in previous episodes that you and I share is that curiosity, right that love of learning and that curiosity lasts forever. I think it's one of the most important qualities of a physician, because as we sit in front of a patient, I'd love to hear your perspective. But for me, every single patient teaches me something, Right?

 Dr. Jill Carnahan, MD - 07:50


We're listening and we're like, oh, really?

 Dr. Tom O'Bryan - 07:52


Huh.

 Dr. Jill Carnahan, MD - 07:52

I don't know how that happens, but let's figure it out, right? And then that and that curious mind is what creates the discoveries of healing.

 Dr. Tom O'Bryan - 08:01

Yes, that's the danger when. When our doctors lose the curious mind and they. They develop routine and people don't fit into routines. I mean, there's some common things you talk about or recommend. Of course, when you have an elevated homocysteine, the B complex, of course, is a component. But it's so much more than that if. And if we're not listening. Dr. Goodhart, one of my first mentors, would say, look with eyes that see, listen with ears that hear. And I used to think, what? What? You know, what's he talking about? Now we know. Now we know what he's referring to.

 Dr. Jill Carnahan, MD - 08:41

Oh, I love it. And you were early. And understanding that energy and light and things that are not visible at all times have a profound effect on the body.



Dr. Tom O'Bryan - 08:51

That's exactly right. People think it's okay to wear those ear pods. Really? Really?



Dr. Jill Carnahan, MD - 08:56

Yeah.



Dr. Tom O'Bryan - 08:57

Putting a battery next to your brain, really.



Dr. Jill Carnahan, MD - 08:59

Right. So the topic today that you and I love to dive deep in and I want to shift to is Ips. And I know you've prepared some slides, so maybe you give us a little overview and then whenever you feel like is a time that's appropriate, you can pop into there and.



Dr. Tom O'Bryan - 09:14

Yes, I'd be happy to. I'd be really happy to because it's such a critical topic. So I thought if I start with about five minutes of slides, they're going to be. Wait, what?



Dr. Jill Carnahan, MD - 09:25

Yeah. First of all, what is Ips? Right? And why does it matter? So go ahead and take. Take the stage, Dr. Tom, and talk about. Yes. Hey, guys. Just a quick interruption to remind you that we have tons of products for leaky gut on our website. Special curated, it's Dr. Jill health.com you can get our gut Kalma powder, our gut immune powder, and our best selling spore probiotic with ig. Those are just some of the powerful tools to help you on your journey for healing a leaky gut and preventing LPS endotoxemia. Okay, let's get back to our show.

Dr. Tom O'Bryan - 10:02



Okay, so I'd like to share my screen now. So let's go ahead and hit the right button and you know, if all is aligned in the universe, it will show up on the screen and ask 10 people, what is the disease that terrifies you the most? And 8 or 9 out of 10 will say the same thing. It's dementia. It terrifies us and with good reason. So some of you will remember way back in 2017, most of the newspapers in the country said Medicare in danger of going bankrupt because of the increase in Alzheimer's and the tremendous expense of occurring from that. And the government put a commission together to figure out what to do about this. They brought world experts in and to investigate this and find out how are we going to stop the momentum of this thing.



Dr. Tom O'Bryan - 11:00

And they put a report together that took two years. It took them two years to put this report together. And there was something in the report that when I saw, I was so happy. Because if we understand this drawing that's in the report, we understand where Alzheimer's comes from. The big picture overview. This was the drawing that's in the report. And if you look on that left side, that word there, prodromal, it means before symptoms and for 20 years before there's any symptoms. People's brains are on fire. They have inflammation in the brain that's killing off brain cells, killing off brain cells. And we think we're fine because we've never tested to see do I have this non symptomatic inflammation that's causing long term damage. And this goes on for over 20 years.



Dr. Tom O'Bryan - 12:05

And then you walk into the parking lot and say, where did I park my car? What row is my car in? Where are my keys? Now we start getting short term memory loss and a loss of our sense of smell or a reduction in our sense of smell. But this is brain damage to the memory center of the brain. This is not, oh, I'm too stressed, I'm getting old, I don't remember the way I used to. Ha ha. Well, how old are you? I'm 38. No, that's not supposed to happen. This is damage that's occurring and then it progresses and progresses.



Dr. Tom O'Bryan - 12:43

My point here with this report from the government commission is that they're telling us there's a prodromal period that's going on for over 20 years with this one, 25 to 30 years of low grade inflammation, killing off brain cells before we ever have a symptom. So if you don't check for this, by the time you're concerned and you start investigating, you're pretty far down the Path already. And I'll show you how important this is. This paper came out last year and it tells us that Alzheimer's and Parkinson's beginning in childhood. They're trying to tell us it begins in childhood and it's preventable. So who says that fatal neurodegenerative diseases and cognitive decline begins in childhood? Well, in this paper they show us that at the University of Kentucky they did autopsies on a few hundred 375 individuals. Their average age was 84, 83, 84.

Dr. Tom O'Bryan - 13:54



And when they did autopsies on them, they showed what percentage of that group of elders had. The blue one is Alzheimer's alone. The orange one is Alzheimer's and frontotemporal dementia. The gray one is Alzheimer's, frontotemporal dementia and Parkinson's. So you can see the percentages of these 83 year olds that had this brain deterioration going on in their brain. The numbers are quite startling. In the same paper, they then looked at healthy 33 year olds who unfortunately died unexpectedly. Look at the percentages.



Dr. Jill Carnahan, MD - 14:36

Wow.



Dr. Tom O'Bryan - 14:36

At 33 years old, this is not just some people, this is all of them. And then they looked at children, average age was 14, who unfortunately had died. Look at the percentages of who already shows evidence of Alzheimer's developing or Alzheimer's and frontotemporal dementia. Just look at the numbers. You say, wait, what?



Dr. Jill Carnahan, MD - 15:03

Yeah, what?



Dr. Tom O'Bryan - 15:06


And here's what it looked like in the paper. All three of them next to each other. I just took them outside by side on the slides so we could understand a little more. But look at the similarities in the percentages of brain deterioration in people, irrespective of their age. We have a pandemic going on that no one is paying attention to. And it's the air pollution that includes lps. It's a fatal brain cargo in children's brains and it's preventable. And in the summary of this paper, what was the bullet point that they had as part of the summary? Well, lps, nanoparticles get into the brain and they trigger that inflammation. All of that occurs. But they tell us we're poisoning ourselves.




Dr. Tom O'Bryan - 16:03

And I mean, every person needs air purification systems in their home and house plants so that where you spend the most time, eight plus hours a day, especially in the bedroom at night, you've got the cleanest, purest air


possible. While we're trying to deal with this larger problem that we've got.

 Dr. Jill Carnahan, MD - 16:22


Tom, I just want to restate because this is such an important point you just made. And all the time I'm talking clean air, clean water, clean food. And I think the frame that you just gave us is so evidence based for the reason, because people don't realize the air that we breathe is 80% or more of the toxic load in our body. And many people don't realize unless they've been listening to you and I, that toxic load is probably the number one elephant in the room, creating complex chronic illness, brain disease, deterioration of all types. So I really love that framework and profound. Even I, who know the data was shocked to see those images. And I know that our listeners would be too. This is profound and it really indicates a big issue.

 Dr. Tom O'Bryan - 17:06


So this is. Yeah, this is not just another good idea, another good supplement to take. This is wake up.

 Dr. Jill Carnahan, MD - 17:12


Right, Right.

 Dr. Tom O'Bryan - 17:13

This is your children.

 Dr. Jill Carnahan, MD - 17:15

Yes.

 Dr. Tom O'Bryan - 17:15

Wake up.

Dr. Jill Carnahan, MD - 17:16



Yes. And if you're not deliberately enacting interventions like air filtration with HEPA and voc, you are behind the eight ball and you're going to succumb to some degenerative disease. There's just no question.



Dr. Tom O'Bryan - 17:28

Exactly right. Exactly right. So now we'll continue a little bit. I've got a few more slides to help give you an idea of how LPS fits into this and what is lps. So let's move to here and bring it back up to presenter mode. And just in case you think this was a third world country, because that last paper was from Mexico City. Now you and I, Dr. Joe, have talked about this one before, Blue Cross Blue Shield and the paper they put out around that same time, but no one paid attention to this because this is when the virus came out and everyone was so focused on the virus, no one, no journalist wrote an article that I could find on this report from Blue Cross Blue Shield.



Dr. Tom O'Bryan - 18:14

And what they told us was in a four year period, the diagnosis of Alzheimer's claims to Blue Cross Blue Shield went way up in four years. Way, way up. And look at the average age at diagnosis. And what caught me the Most was this one 407% increase in 30 to 44 year olds.



Dr. Jill Carnahan, MD - 18:39

Wow.



Dr. Tom O'Bryan - 18:39

This was like. Wait, what?



Dr. Jill Carnahan, MD - 18:41

Yeah, exactly. Look at that.



Dr. Tom O'Bryan - 18:45

Yeah. I mean, it's so easy to ignore this because it's so startling. Just like the last study. They're so startling. So let's take a look at what this LPS thing is. What is it? It's one of the main toxins responsible for inflammation and it ranks among the most potent stimulants of your immune system found in nature. Now, I'm half Italian, so I'm going to tell you what these authors are saying. But if this author, one of these authors, was on stage at a conference that you and I go to, Jill, you know darn well that they would be. One of the main toxins responsible for inflammation induction are lipopolysaccharides from gram negative bacteria, which rank among the most potent immunostimulants found in nature. They're geeks, they don't express themselves in terms of the startle effect of this information.



Dr. Tom O'Bryan - 19:46

And so many people fall asleep listening to what they're saying. Lipopolysaccharide ops the majority of component of the outer membrane of gram negative bacteria. So LPS is a vest over the bacteria. It's how bacteria have learned to survive over hundreds of thousands, if not millions of years. When the bacteria gets into a mammal, the way it survives the mammal's immune system is it developed this vest. And the mammal's immune system, including the human immune system, can't break it down, it can't digest it and get rid of it. So that's this protective vest and it's a barrier protecting it against the environment inside the mammal. This is lps. How do you fight that? Yeah, this is what we're up against. And I show this picture because I need our doctors. I show it on stage and everybody's eyes are just popping out of their head.



Dr. Jill Carnahan, MD - 20:50

Brilliant. Yes.



Dr. Tom O'Bryan - 20:52

You know, but you have to develop the protocols to address this. And it's not easy because the human immune system does not break down lps. These bacteria have successfully come up with a way to survive inside a mammal. And listen to this article. LPS is one of the most powerful microbial inflammation indicators or this article. LPS is responsible for the development of inflammation. And for those that don't know, the center for Disease control tells us that 14 of the 15 top causes of death are chronic inflammatory diseases. It's your immune system being activated. And why is the immune system being activated? Mrs. Patient, your immune system is the armed forces in your body. It's there to protect you. There's an army, a navy, an air force, a Marines, a coast guard. We call them IgA, IgG, IgE, IgM, Cytokines.



Dr. Tom O'Bryan - 21:54

But they're just there to protect you. So the million dollar question is what are they trying to protect you from? And it's perhaps the most potent stimulator and trigger of inflammation known. Our researchers couldn't put it in front

of us any clear than the way they are. And in the brain, LPS causes inflammation that results in the Degeneration of the neurons, and that's the mechanism for brain deterioration diseases, is that these neurons, these nerve cells, they just degenerate, they get inflamed and they fall apart. Now, I wanted to bring this up because we've heard about this thing called amyloid in the brain and that it's a marker of Alzheimer's and people think amyloid is bad for you. It is not. Amyloid is not bad for you. Excessive amyloid is bad for you. It's the most, one of the most prominent phenomena in the brain.



Dr. Tom O'Bryan - 22:56

Why? Because to a far greater extent than anyone suspected, amyloid is protective in your brain. Yes, it's neuroprotective, it defends against the bacteria, the LPS that you're being exposed to, because the LPS got in your bloodstream, it got in your lungs, you're breathing it, you know, it got in your lymphatic system. And if it gets in the brain, your body produces amyloid to deal with it. And this is Robert Moore, he's a professor of neurobiology at Harvard Medical School. And what he tells us is that amyloid beta is the chief name of a peptide that builds many different molecules in the brain depending on what kind of bacteria it's having to fight. And our researchers, you know, they're geeks at heart, but they call these amyloids Lego peptides. Now I've got a five year old that plays with Legos, right?



Dr. Tom O'Bryan - 23:58

And that's what amyloid is, that your body, your immune system is going to put together. Exactly, the Lego peptide to deal with whatever bacteria has gotten into your brain. And the data supporting this idea that amyloid beta contributes to survival throughout life, it's in all vertebrates, not just humans, but all of us.



Dr. Jill Carnahan, MD - 24:20

And Tom, it's no wonder there was epic failure with these anti amyloid drugs for all.



Dr. Tom O'Bryan - 24:25

Exactly.



Dr. Jill Carnahan, MD - 24:26

Because that's not the target, Right?

Dr. Tom O'Bryan - 24:28



Exactly, exactly. And their keynote finding was that the plaque of amyloid is as important because the plaque directly entraps the bacteria. It surrounds the bacteria like a snowball. If there were a rock in the center of a snowball, right, you just pack it in there so that it can't hurt anyone anymore. Then by chemically generating a burst of what are called oxygen radicals, and it's just bleach, you know that it develops bleach in the brain that kills the bacteria. First they trap the bacteria, then your beta amyloid secretes a bleach to kill it, and then they entomb it forever so that it can't ever cause a problem again. So the critical takeaway to these slides is that amyloid beta is the permanent tomb of pathogens. Its job is to bury that stuff so it can't harm you anymore.



Dr. Tom O'Bryan - 25:31

It traps pathogens like amber around an insect to prevent spread and to kill the bacteria. Those are the slides that I wanted to show so that we now we understand what LPS is, what gets in there. It's the bad bacteria. It's the vest of the bad bacteria that gets in there. And that's what we're dealing with. And that's what very few doctors are putting any attention on whatsoever.



Dr. Jill Carnahan, MD - 26:01

Love this, Tom. And I love the frame, especially around the brain, because like you said, most people listening, whether they're 30 or 85, are concerned about, you know, how will my brain function, will I lose function as I age. It's really on the minds of most everyone that I treat. And this is important because we're going to talk about what we can do about it. But I really also like the frame around the amyloid because of the media, because of the pharmaceuticals, we've gotten to think that this amyloid is a bad guy. It's actually protecting us. And just like the cytokine stores in the immune system, they're trying to do their job. And of course they sometimes get out of control. But if we frame our body around, it's doing the right thing to help us. But where did it go awry?



Dr. Jill Carnahan, MD - 26:41

Or where did they get over aggressive and then think of it in that sense?




Dr. Tom O'Bryan - 26:45

So exactly. Yeah. It's like, why is it going awry?




Dr. Jill Carnahan, MD - 26:49


Right?

 Dr. Tom O'Bryan - 26:49


Why? What's going on in the body that's causing.

 Dr. Jill Carnahan, MD - 26:51


Because maybe it's just doing the right thing. That's right, like you said. So lps, now I want to tie it back because LPS people are like, where does it come from? What? You've done a really good job of saying, what is it? And I want to talk, obviously I love the emphasis that it's also an external factor. We see this in mold related illness. We see this in environmental toxicity from nanoparticulate from fuels. We see it in after forest fires and fires in cities like here in Colorado. But we also see it in the gut. So maybe let's just dive a little bit into the gut because that's an internal endotoxic source and talk about like, how can this come from the inside out and affect us.

 Dr. Tom O'Bryan - 27:28

What our historical immunologists tell us is that a little bit of LPS stimulates the immune system to get Stronger and to fight the bad guys. It's great. It's great to have a little bit of it. The problem is, in our modern culture today, we've created an environment inside our gut that causes what's called leaky gut. Now, leaky gut is not bad for you. It saves your life every single day. But excessive leaky gut is bad for you. And we, unfortunately, all of us are prone to excessive leaky gut because we eat French fries and we drink Coca Cola and the chemicals in the water, that's the tap water and everything. There's so many things we're doing today that create this inflammatory environment in our gut that we get leaky gut.

 Dr. Tom O'Bryan - 28:26

So the little bit of gram negative bacteria that's healthy to prime our immune systems to make us stronger, that just flows right into the bloodstream because of leaky gut. And as our friend and mentor, Alessio Fasano has told us, all disease begins in the leaky gut. Yeah, all of it. Every chronic degenerative disease. And so the. The goal here is to always focus, to include a primary emphasis on healing the gut and then supporting a healthy gut and healthy digestive system.

 Dr. Jill Carnahan, MD - 29:06

What a great frame. And interesting to your point. I remember studying when I had chemotherapy for breast cancer, I had three drugs. One was Cytosan. After the fact, I developed celiac and Crohn's disease. And I was like, I wonder if there's a connection. Well, of course, Tom, there is. Because I realized in the literature cytoxin, one of its main mechanisms of action is to create a more permeable gut, allowing that LPS to stimulate the immune system,

which could actually help you fight cancer. Which sounds, again, very bizarrely strange. But this is all I love your frame here, because amyloid, lps, none of these things are inherently bad. They are developed in our system, developed with them in order to survive. But what happens is when things tip over into excess, then we have trouble.



Dr. Jill Carnahan, MD - 29:48

So a lot of people have heard you talk before on my show, but I want to go back to what causes leaky gut you mentioned, like food quality and that. Let's go back to just a little framework of how many people know they have leaky gut. What are the symptoms and what causes it.



Dr. Tom O'Bryan - 30:02

Yeah, yeah. Sometimes you don't know that you have leaky gut. You don't know you have symptoms. I would suspect most of the time the lucky people are the ones who eat wheat, as an example, and their gut hurts. They're the lucky ones.



Dr. Jill Carnahan, MD - 30:18

Yeah.



Dr. Tom O'Bryan - 30:19

Because you can't argue with that. Right? The. But that's a small percentage. The majority of people, when they eat wheat, it triggers the immune response in the gut. It triggers the leaky gut and then the LPS that gets into the bloodstream. And so the systemic inflammation, which is what pulls on your chain. Yeah, this is Mrs. Patient. A chain always breaks at the weakest link. When you pull on it's at one end, the middle, the other end. It's your heart, your brain, your liver, your kidneys. Wherever your weak link is, that's where the chain is going to break. So when you have excess inflammation in your bloodstream, you're pulling on the chain. So maybe your genetic vulnerability is kidneys. And so a sensitivity to wheat will manifest as kidney problems. And you never know because you feel fine when you eat wheat.



Dr. Tom O'Bryan - 31:14

I mean, that's an example that you can't go by how you feel. The concept of determining protocols by how you feel was historically very helpful, but outdated now because we have such excellent testing available. Excellent. I mean, and I'm rocking boats here. I know I am. But this concept of the elimination diet is historic. But it. Well, I've eliminated all these foods, Doc, that run the test. And when I go back and I eat this one, I don't feel bad, my symptoms don't come back. So it's okay for me, right? No, no, because it might be your kidneys that are going to

manifest the problem. Right. So our friend Dr. Andrew Campbell says it so very well.



Dr. Tom O'Bryan - 32:01

I saw him about two months ago at a conference and we had dinner and I said, Andrew, I have a picture of you on a slide in every talk I give. And his wife looked at me and he looked at me, and I said, I put up your picture and then I put the quote in God we trust, and then I click the button. All others require data. That's great because that's so true, you know, how are you going to do a comprehensive redirection, shifting the direction of someone's quality of life and quality of health? If you don't know what you're dealing with, how are you going to do it? Well, you know, we're going to do the elimination diet.



Dr. Tom O'Bryan - 32:51

Well, that will help to some degree, but I've not seen a paper that it increases healthy lifespan, you know, because you're still creating the inflammation, but it's just manifesting in your kidneys or in your brain or wherever your weak link is. So it's critically important to do the tests that identify what's your current status. I mean, I am so tickled There are five tests that someone has to do before I'll talk to them. You know, that I see maybe like the flow over from your practice because you have a multi year waiting list, which is kudos to you and way to go. I'll see one patient maybe every two weeks because I love to keep my hands in there, right. They have to send me five years of test results so I can see the history of what's developed.




Dr. Tom O'Bryan - 33:49

And they do these five tests. One of the tests, and I just loved yesterday, I had a consult yesterday with a woman and the test is called the oxidative stress profile and I just love it because it looks at 24 genes that tell us if your body has a problem detoxing or if it has a potential problem of detoxing. I normally don't do genetic tests as a first tier because that's just the potential that doesn't tell us the problem. But this new test not only looks at the 24 genes, but it looks at 18 biomarkers if those genes are activated, like 8 hydroxy 2 deoxyguanosine, which is a validated marker of DNA damage.




Dr. Tom O'Bryan - 34:41


This woman yesterday, who's been working so hard in her life to be healthier and there's a history of Alzheimer's in the family and so she was concerned, but when we did this test her 8 hydroxy, the measure of DNA damage. And the DNA is just the blueprint in your cell, Mrs. Patient. Every cell in your body regenerates, every single cell. But how does that happen? You've got a blueprint and the blueprint tells the new cell where to put the proteins and all of that. Right? So that's called your DNA. But when the DNA gets damaged, the blueprint is misread. And when it's misread, the new cell can be what's called a mutagenic cell. That's what causes cancer, is, you know, these damaged DNA cells.

 Dr. Tom O'Bryan - 35:31


So her tests, her oxidative tests showed that she was tenfold above the limit and eight hydroxy two deoxyguanosine and she's doing organic and she's had four different doctors in the last three years and is doing really good. But she heard it talked by me and wanted to just get another opinion because she felt really good. Her symptoms are much reduced. But look at.

 Dr. Jill Carnahan, MD - 35:56


Yeah.

 Dr. Tom O'Bryan - 35:57

Now, I don't know where it was a year ago or two years ago, but right now, today, Mrs. Patient, the way you're living your life, you're tenfold above the limit. Damaging cells Damaging cells. Damaging. And she just, she started crying actually. And I said, no, no, this is great news. A good. This is really good news. You're a mess. This is really good news because we're going to fix it. Yeah, we're going to fix it. Right. And in six months it should be down to normal or almost normal. So, you know, when you frame it that way, you want to identify where the problems are so that you can then laser specific, address them.

 Dr. Jill Carnahan, MD - 36:38

Yeah, no, I love that Tom and I love you talk about a specific patient. And our friend Bob Rountree always said it keeps us honest. Right. To keep seeing patients. I love that's true. Those who never see patients, I think they lose the conduct with the complexity and the day to day because every new patient, like we talked about, teaches us something. So back to this patient. I think it's so interesting because one of the things I'd love for you to talk more about is people can be, you know, eating clean. That's really important. And doing a lot of the right things. But if they have no air filtration or they're living in a moldy home, or they're living by an airport or a busy highway, or any number of things they don't realize.

 Dr. Jill Carnahan, MD - 37:14

And I feel like so often we go to these fancy applications like hyperbaric oxygen and stem cell, you know, IV stem cells and red light therapies and devices and thousand dollars and they're doing all these things and the very basics. Which is the.

 Dr. Tom O'Bryan - 37:30

Exactly, exactly.



Dr. Jill Carnahan, MD - 37:32

Clean water. Talk about that. Because you and I share this and it's like you don't have. You can do some of these things for free and granted, like an air filter, but like, you don't have to be spending thousands of dollars. And the basics matter movement. Right.



Dr. Tom O'Bryan - 37:44

Critically important. So in this person who had seen some very good practitioners and had made some very good changes in her gut, there were some pre and post gut tests. So. Well, look at this. You're really on the right track. But what did they miss? Why is your eight hydroxy. Yeah. Tenfold out of range? It was mold.



Dr. Jill Carnahan, MD - 38:03

Oh, see? Crazy. But so.



Dr. Tom O'Bryan - 38:06

Absolutely right. It was mold.




Dr. Jill Carnahan, MD - 38:07

Yeah.



Dr. Tom O'Bryan - 38:07


It was five different types of mold. That was sky high. Sky high. And she doesn't know where it's coming from. I said, well, that's our journey now is to figure out. I actually gave her your website to read more about exploring mold toxicity. So. So but for her, it was mold. She didn't have a lot of organophosphates. One of the tests I recommend looks at that. She also had a lot of problems with wheat.

 Dr. Jill Carnahan, MD - 38:34


Okay.

 Dr. Tom O'Bryan - 38:34


And she thought she was gluten free, but she wasn't or she's not. Lots of, lots of problems with wheat, but it was wheat and mold that's triggering all of this inflammation for her. So she was so grateful, so very grateful for the consultation because now she understands where to be laser specific in her efforts to include the things that she has been doing that are working. But also now she's going to find out she'll get a mold remediator in there. And I said, you have to check your home, you have to check your car, you have to check where you work. You'll find it. Yeah, you'll find it. And as an example, I had a 12 year old Brazilian boy who had a failure to thrive, a celiac, but failure to thrive. He wasn't growing.

 Dr. Tom O'Bryan - 39:27


And the mother had been working in this for two years. And meticulous mother, they travel with their own pots and pans and silverware. They're that meticulous about making sure there's no contamination. So I knew it wasn't contamination and, but the five tests that I recommend, and what was it? It was mold.

 Dr. Jill Carnahan, MD - 39:47

Wow.

 Dr. Tom O'Bryan - 39:48

So she checked her house, nothing. She checked the school, nothing. We had another consultation. She said, I've checked here and I've checked here. Here's the reports. There's really nothing. What do we do? And I said, he's getting it somewhere. Maybe it's in the locker room at school. Maybe they just check the air in the hallway. I don't know, I don't know, but he's getting it somewhere. Review where he spends his time regularly and you will find it. Well, oh, doctor, every Friday night he goes to his grandmother's house for an overnight. Could it be there? Absolutely. Turned out there was black mold behind the wall of the bedroom he was sleeping in.

 Dr. Jill Carnahan, MD - 40:35

Wow.



Dr. Tom O'Bryan - 40:36

And when grandmother remediated that mold, the boy grew three shoe sizes in six months.



Dr. Jill Carnahan, MD - 40:43

Wow, Tom. And this is back to the curious. So I want to come full circle and then let you wrap this up, but there's a couple things that are so important. Of course, you know I love to talk about mold, but LPS is connected. So two things. First of all, Bredesen's work on Alzheimer's, where we started with this discussion. He used to say, when I was working with him, I don't know, five, ten years ago, one in three of this younger, 30s, 40s, 50s, Alzheimer's is mold related. He now recently, when I talked and said it's more like two and three, Jill, of these younger developments. So, number one is there is a connection between mold and Alzheimer's. And I have come to believe we used to think binders are amazing for. So when someone's mold toxic.



Dr. Jill Carnahan, MD - 41:22

Again, people have heard me and you both, but typically they'll do liver support detoxification. We want bile acids to flow, and we use binders like clay and charcoal and glycominans to kind of help pull out those mold toxins. However, my favorite barn binder is charcoal. And guess what? Charcoal happens to be really fantastic at binding lps. And I have a theory that some people who think they're mold toxic and are doing this binding for mold, they're getting better pretty much all across the board using charcoal. That was my main binder. We know mold creates massive mast cell, which creates permeability. So mold is probably the biggest trigger of intestinal permeability or leaky gut. And what if, Tom, what if we think we're binding the mold? And yes, we are, but what if the bigger thing was we're binding lps?




Dr. Jill Carnahan, MD - 42:08

And what if our detox protocols are actually. We don't even know it, or we're not talking about it openly, but I believe perhaps one of the most important things we're doing in our detox protocol is binding lps.




Dr. Tom O'Bryan - 42:19


I think you're right. And I include binders all the time. It's an important component. And one topic that I just want to throw it out there for people to have in the back of their minds when they're talking to their doctors, are starting. They're starting to research this topic, is that when LPS gets in your bloodstream, your immune system can't kill. Cannot. The best that you can do is, like, produce amyloid to kind of like amber. Like a mosquito in amber, is to wall it off. But what happens is it gets deposited in your tissue. And it was 2010 when this article came out that got me so excited. I downloaded this article. I was reading it. I called our friend Dr. Ari Vojdani, and it was 10 o'clock at night. We're good friends.

 Dr. Tom O'Bryan - 43:16


And so I called him at home, and he answers at, tom, are you okay? He said, Tom, it's 10 o'clock at night. What is it? And I said, all right, listen to this title. Oh. We were on the phone for two hours talking about this.

 Dr. Jill Carnahan, MD - 43:32


Yeah.

 Dr. Tom O'Bryan - 43:32


Because what they identified was that the average of the intestinal tissue for those that had leaky gut, the average was 13%. Of the tissue is made up of LPS. Wow. Think about that for a minute.

 Dr. Jill Carnahan, MD - 43:53


Wow.

 Dr. Tom O'Bryan - 43:54

The tissue itself, not just in the bloodstream, not just in lymphatics, but the brain, the kidneys, the lung. This is where sepsis comes from.

 Dr. Jill Carnahan, MD - 44:05

Yes, yes.

 Dr. Tom O'Bryan - 44:05

The number one cause of death of elders in hospitals is sepsis. It's a lifetime of LPS accumulation and then this

inflammatory cascade takes off and your body can't deal with it anymore. So it's critically important for people to become educated on the basics of this concept of LPS so that everyone in the family includes on a daily basis, some mobilization of this stored junk that's in us. Avoidance of more exposures and healing the gut. Critically important, if you want, and we both talk about this, there's a difference between a healthy lifespan and a total lifespan, right? Men live to 78, women to 83 on average. But healthy life stops at 62. That almost everyone has a diagnosis of something after 62. They've got morbidity, they've got a disease that they're diagnosed with. So there's a difference between healthy lifespan and total lifespan.



Dr. Tom O'Bryan - 45:13

And what I say to patients all the time is, Mrs. Patient, I don't know if we're going to extend your lifespan. I don't know. We'll know when you die if we did or not. You know, I don't know. But we certainly, and I can promise you we can extend your healthy lifespan so that the time of disability is much shorter in your life. And that's the goal that I would suggest we focus on, is extending healthy lifespan with all the markers of your athletics or your exercise and your vitality and your brain function that you want that mark, that you're healthy. And I don't care what your age is, that your healthy lifespan is extending. That's our goal.



Dr. Jill Carnahan, MD - 45:56

What a great way to kind of wrap up this incredible discussion. As always, Tom, even with you and I always learn and discover a new way of thinking about things. You've got such a great articulate way of describing what's happening in our body. And I know people have enjoyed this. Before we go, two things. Number one is for you personally, what are your top three non negotiable things to keep you healthy? And then where can we find you and find more about your work?



Dr. Tom O'Bryan - 46:20

Oh, thank you. The top three things, non negotiable. First, expressions of love to my wife and my son. I, I have a five year old, he's five tomorrow actually. And so, and I've learned how to be a Much better father the second time around. Right. My adult kids are wonderful, my grandchildren are wonderful. Everyone's happy and successful in life. And I know where I made mistakes the first time. And you may remember, Jill, I dedicate every talk on stage. I show a picture of my son and I say I dedicate this talk to my son and all the children of his generation because I believe the only way we're going to save the planet is to raise a generation of children that think outside the box. Yes, they think differently.



Dr. Tom O'Bryan - 47:08

And so that's my non negotiable is to avoid in every way I possibly can putting restrictions on him. Like no, don't do that or yeah. Because I think as a father I'm supposed to create the frame that he lives in. No, no, I create the frame of safety for him. But his job is to explore whatever he likes and wants to explore. So that's a non negotiable. The second is water hydrating well enough and I just will not drink tap water. If I'm at some location or I'm in a hotel and I don't have water, I'll call down to the concierge and you know, have water brought up to the room. Bottled water, glass bottled water. Or I'll go to Whole Foods. I've learned from you, right, to do that. And the third thing is I

just don't eat garbage ever anymore. Ever.



Dr. Tom O'Bryan - 48:06

My worst habit for the last few years has been potato chips when I'm really hungry and I think it's the salt but I just won't do any of it anymore. This body has less resilience to poison it with garbage that I shouldn't eat. And so perhaps those three will help for people to think about and to find us. Our website is the doctor.comthedoctor.com and last year we did a docu series called the Inflammation Equation. I traveled to seven countries and interviewed 64 including Dr. Joe. Experts on where does inflammation come from. Lots of discussion about lps. The studies I showed you today are in there. Lots of to do's, there's I think 30 something to do's for people as a result of listening to this expert talk about it and it's all free and it's at theinflammationequation.com Dr. Tom, as.



Dr. Jill Carnahan, MD - 49:16

Always it's been such a pleasure and you bring such light to the world with your knowledge. Thank you for all that you do and continue to do. And if you're listening you can find all of his websites and the inflammation equation, is that correct? Yes, at the Show Notes. So we'll have that there. And thank you again for joining me.



Dr. Tom O'Bryan - 49:35

Thank you, Dr. Jill. Always a pleasure to dance with you.



Dr. Jill Carnahan, MD - 49:38

Hey everybody, wasn't that a great interview with Dr. Tom O'? Brien? He is always full of energy and valuable information, and today was no different About LPS in the brain, maybe a connection that you haven't thought of before. If you enjoy this podcast, wherever you're listening, would you stop by and leave us a review? And if you're on YouTube, we would love to see you join the over 700,000 subscribers by hitting subscribe and the bell to be notified of future episodes. As you know, we have a new episode out every Wednesday, and I will look forward to seeing you again next week for another episode of Resiliency Radio. Until then, goodbye.