Dr. Keesha (00:01):

Welcome back to the Reverse Autoimmune Disease series, everybody. First we're focusing on the Autoimmune Brain this time. Delighted to bring to you Dr. Daniel Pompa, who is a respected researcher, author, podcast host, and teacher. He specializes in root cause inflammation driven disease, the therapeutic application of a ketogenic diet, fasting, ancestral-based health approaches, cellular healing, and detoxification. Dr. Pompa speaks about removing the cause of toxicity inflammation going upstream and following a multi therapeutic approach to health and healing. Welcome to this series.

Dr. Dan (00:36):

Thanks for having me. I love this topic.

Dr. Keesha (00:40):

Yeah. So when I say the autoimmune brain, what comes up for you?

Dr. Dan (00:46):

Two things. [Laughing] Because there's two brains, there's this brain and there's this brain.

Dr. Keesha (00:55):

Yeah. You should probably clarify where you just pointed Dan. [Laughing]

Dr. Dan (00:59):

Exactly. [Laughing] That is a good—actually, good point.

Dr. Keesha (01:04):

You know, my PHD is in sexology.

Dr. Dan (01:06):

I've heard it said that men think with the wrong brain.

Dr. Keesha (01:10):

Exactly. [Laughing].

Dr. Dan (01:10):

Okay. All right. I should have went like: this brain. Okay? All right. All right. I like you a lot right now because that's funny. All right.

Dr. Keesha (01:20):

We're off to a good start! [Laughing]

Dr. Dan (01:23):

Anyways. But I wonder if anyone out there watching actually was like, thinking that. I bet you there was. Very clever. But, yeah, no. I mean, there are in fact two brains, right? The gut—I'll say it this time—is called the second brain. And when you think of conditions, neurodegenerative conditions, my brain goes to so many of them like MS and so many of them are in fact linked to autoimmune. Then you think of autoimmune and I have what I call my three legged stool. Years ago I wrote an article and it just went viral. It was the autoimmune answer. And I basically said there has to be three things as a cause, but also the solution lies under those three things. And the gut is one of them, right? So, as that brain is part of the cause and the solution of autoimmune, when you make that statement, those two things come to my mind.

Dr. Keesha (02:20):

Yeah. So let's talk about like—take each one of those three legs of the stool and let's unpack it a little bit and how people can really track that.

Dr. Dan (02:31):

Yeah. You know, look, I'm a firm believer in if you get up to the cause of something, you can fix something, right? If you say it more clearly, the body will fix it. If you remove the causative factors—oftentimes what I find, and I'm blessed to train doctors all around the world in very unexplainable illnesses and autoimmune is one of them. Matter of fact, I always say that most people that don't feel well, they have autoimmune and they just don't know it. They just haven't been diagnosed because the testing is so—

Dr. Keesha (03:02):

And that's a cause right there, because a lot of people will hear a story about someone that has autoimmune and they say, "Thank goodness I don't have that", but it can take anywhere from 10 to 30 years to develop an autoimmune disease. So it pretty much—when you're listening to our voices, you could have something growing inside of you, especially if you have fatigue or unexplained pain or muscle

aches, or like any number of things can go in the autoimmune bucket because they're labeled inflammatory.

Dr. Dan (03:31):

Yeah.

Dr. Keesha (03:31):

I just want people to really understand that.

Dr. Dan (03:34):

Yeah. And really, you're right. If you don't feel well and you don't know why, okay, you have inflammation. But oftentimes your body's causing the inflammation, aka autoimmune. Right? I mean, again, to your point, it may be 20 years down the road before you actually get the diagnosis. And the testing, I always say, is in the stone ages for autoimmune. Then of course we just slap a name on whatever. We now say, "Oh, your body's attacking your skin, or your joint." Whatever it is, then we give it a name. But the fact of the matter is, is really the problem is your body's attacking itself somewhere. A gene is turned on—brings me back to the three legged stool. I think we know the analogy of the three legged stool. All three legs have to be there otherwise it doesn't stand up. Okay. So all three of these things working together in a cause. Then again, you'll see the solution lies there as well. So, look, the old dogma was, "Oh, you just had Hashimoto's 'cause your mother had it." All right, that's the old dogma of genetics. But we know now that genes get turned on. We also know—and this is the exciting part and the hope—is that genes can be turned off. So you may have had inherited a gene of susceptibility from your mom or your dad. We all have, by the way, you have susceptibility genes. I do.

Dr. Keesha (04:57):

I had rheumatoid arthritis, my grandfather had it.

Dr. Dan (04:59):

Yeah. So, why rheumatoid? Well, that may have been a susceptible gene, right? Yeah, that was triggered. But look, the new understanding is epigenetics. Meaning that you didn't get it just because your grandfather did, you weren't doomed, you just had a susceptibility. We still have to have these other factors that triggers the gene, which I'm getting to. So we have genes that get triggered, then we end up with the autoimmune of our genetics. Now the good news is, is there's so much science. I love teaching doctors the science around, we can turn these genes off. I have what I call my five Rs of cellular healing that I teach them. It's a roadmap of, this is what's going on in the cell that turns on genes and these things are the things we can do to turn off it. We can unpack that later, let me just get through the

stool here. But then we have another leg of the stool, I call it the center leg because when I draw it's—here, matter of fact, let's just do it for fun. So here is my horrible stool. I'm drawing it right now, but you'll see that it is a horrible stool. Okay. That is my stool. Okay. All right. So we have one leg that I already unpacked. We'll just put DNA in there, but remember it's DNA that we can change. it's not that you got unlucky. This leg, I'm going to write stressors in there. And the reason is, is because stressors, physical, chemical, or emotional, can trigger these genes. Okay. So you might have your—we all do. We all have susceptibilities. Okay. But we need these stressors to actually trigger them. And again, good news. We can turn them off. Good news here. We can get rid of stressors. Okay. These are causative factors. Now, I said the gut is another leg of the stool. Okay, and let me explain that. There's really a lot of new science around what we call the microbiome, right? And that's your gut bacteria. Now there's something called the whole microbiome. What does that mean? That means your genes connection to your genes—I mean, I'm sorry, your bacteria's genes connection to your genes. That's sounds unbelievably hard to believe, but it's true. Literally your bacteria connect via your DNA and they call that literally the whole of your epigenetics. So there's this relationship between stressors and your genes and there's relationships between your microbiome and your genes. Okay. Then there's also relationships to stressors in your microbiome. So imagine a stool where it has the bars that connect all the legs. Right? So all of these are connected. All right. So just to close that loop so y'all can understand the connection of bacteria and how that would actually trigger autoimmune. There's certain bacteria in your gut, one of which is called Bacteroides, but there's others. Their job is to make something called T regulatory cells. And it does it with that holo connection with your DNA. So it literally causes the body to make these Treg cells, and those are immune cells that tell your immune system, "It's okay. Back down. Don't attack itself. It's just a piece of pollen." You know, whatever it is, right?

Dr. Keesha (08:32):

A blueberry.

Dr. Dan (08:32):

Exactly. "It's just a chemical. We're cool." Right? So that's their job. Now, remember what I said? You have to have a certain level of Bacteroides to make a certain level of Treg cells, otherwise you don't make enough and otherwise your body can go into this hyperdrive. So you have to understand the bacteria connection, the stressors have to be there, and genes actually do in fact get turned on. All three of those things happen, and then we end up with the autoimmune of our genetic weakness. The good news is that the solutions lie under here as well. One of the things I've been teaching for many, many years, is what I call a multi therapeutic approach, meaning you can't just do things that turn genes off. You can't just address the upstream stressors. You can't just address the microbiome. So a lot of people say, "Fix the gut first." Well, you can't fix the gut without getting rid of this upstream, toxic infection

that's right here and it's affecting the gut. So the point is, is that when you put all of those things together, the same way you got the condition, you can turn it off. And that's what I love teaching.

Dr. Keesha (09:42):

Then I pull out them stressors like, you're actually not getting rid of your stressors. You have to change your relationship to your stress if it's emotional.

Dr. Dan (09:53):

Especially if it's emotional.

Dr. Keesha (09:53):

Because if you're somebody with a child or you're caregiving an elderly parent, or you have a really high impact job that you love, but it's stressful, you're not getting rid of any of that. But you can change how you're relating with it.

Dr. Dan (10:04):

Perception.

Dr. Keesha (10:04):

Right, it's all about perception. And if you don't, that cortisol keeps getting released, that then breaks down your gut wall, which then influences how your genetics express themselves. And it just keeps going in that vicious cycle. So let's talk about those five Rs.

Dr. Dan (10:18):

Yeah, and I would even argue, just to your point, is trapped emotions. I mean, these are emotions that literally are trapped in our DNA and our subconscious. Okay. Those were from stressors in the past. I believe you have to—

Dr. Keesha (10:34):

From up to 12 generations, by the way.

Dr. Dan (10:37):

Absolutely.

Dr. Keesha (10:37):

Yeah.

Dr. Dan (10:38):

So I believe you have to change the way we think even about that, the past. So you're right, we have to change the way we think about what's happening present, but we also have to think about our traumas even from the past and we have to reframe. And that doesn't happen overnight, right? But we have to realize that you are who you are right now. Thank God for every trauma and stressor we've had. And I remember there was a gal who I absolutely loved, her name was Joni Eareckson Tada. And she was a Christian who had a ministry that changed lives. I mean, I'm telling you, she was a strong, strong human being. She said many times people would come up to her after she'd speak and say, "I'm praying for you that you'd be healed and up out of your wheel wheelchair"—I didn't share that she was a quadriplegic. And she said, "I have so many things that you could pray for". And she said this from her heart and meaningful that, "I have so many things you could pray for and I'll tell you some. And thank you so much, but this chair is not one of them. This has now become my crown, meaning that I wouldn't even be here. I wouldn't have affected you or this person without this." You see the reframing? And I don't know anything more horrible—I'm sure there's something—than being paralyzed, being a quadriplegic. But, I mean, she reframed it to that was her crown. So that's the way we need to think about all of our traumas. So anyways, yeah. So, we're talking about the stressors, right? My cellular detox is more of the chemical answer there, because look, we can look at the research through and through and there's certain chemicals that turn on genes. You mentioned generation. The Duke university study, I'm sure you're familiar with, they took two identical twin groups of mice, same DNA, right? They put them in the same exact environment, perfectly. Fed them the same, everything the same. And the one group, they exposed to a specific toxin and it triggered a gene. They named it the agouti gene, but they no doubt had a thyroid condition that got expressed with the stress of this chemical. Their hair turned dry, it turned yellow, and they became obese. The next generation, without being exposed to the chemical, was born with that gene turned on. So it was epigenetic. And it transcended that generation. So, that was sad because they were born doomed to be that. Now we would have thought, "Okay, that's that. There's nothing we can do. You got the gene." Well, not true. The best part of the study was that they turned off the gene expression. And when they turned it off in the parent, the next generations it was turned off too. So that was the cool thing. Then that younger generation, they were able to turn off so they didn't pass it forward. So that's the fun thing is, that we can in fact turn off these genomes. There's little switches.

Dr. Keesha (13:38):

Well, it needs to be the motivating force that information for, "We are never doomed." It is not written in stone. We actually have autonomy over how our genomes express themselves, how we are in the world, how we perceive ourselves in the world, like all of that is really inside of us and inside our job. And that's the great news about that study.

Dr. Dan (14:06):

I want to show this—now that you have me drawing. So if we do this, I said how we perceive our world is how we become, right? So if we do this, if we look at ourselves, so here we have—I said, physical, chemical, and emotional stress. All of those influence our DNA. Every one of them. Now, what you have to understand is that they influence the DNA, not by going directly into the DNA. This is a cell by the way. I just kind of drew the nucleus there, but on every cell on the outer cell wall if you will, the membrane, we have these little receptors and these receptors are actually the communication towers that hold your hormones. So let's use thyroid hormone or insulin or whatever it is. It has to attach to these receptors and get its message in the cell, then you're an efficient fat burner. You feel great. You don't have brain fog, anxiety, whatever it is. So when that works, that's great. But oftentimes inflammation can blunt those receptors and then the hormone doesn't get in. Right now it's very in vogue to take things, to make our blood levels—I'm pointing up here like this is your blood—to make your blood levels better. But if the hormone can't get in, you don't feel better. Okay, now let's take it from another point. Everything has to communicate with this cell membrane, even physical, chemical, and emotional stressors affect our cell membrane. So Bruce Lipton was one of the early STEM cell biologists who said, "Hey, our thoughts are wavelengths." Just like your hormone gives a wavelength, an energy in one cell to the next, your thoughts create a wavelength to communicate with these receptors. Then it changes your DNA and then your DNA makes certain proteins. Proteins is who you are. It's who I am, it's who we are, whether it's your hormones, it's your skin. It's everything. We are proteins. So the DNA then, from a thought, okay, an emotional, a thought changes our DNA via this membrane believe it or not. Then those proteins become who we are, whether it's a happy, healthy human. The good news is we can change the inputs and then we can change our DNA, ultimately our proteins, and ultimately who we are. So it does start with our thoughts. Lipton said, "Negative thoughts cause cellular inflammation and then it will block other hormones. It creates even worse proteins and a worse human." So the point is he realized that the whole intelligence of all your body resides in these membranes and how it perceives all of the stressors. Isn't that incredible? But the hope and the good news is that we can change the inputs. We can change our thoughts. We can change the chemicals. We can change our DNA. We can change our proteins. And after a while, we literally become a new person. One that we like better! [Laughing]

Dr. Keesha (17:18):

I mean, this is the thing that I talk about all the time is how we proceed is everything, right? A lot of times people will say it's odd, but it's actually—in Buddhist psychology, there are 17 different steps to 1 perception, which is very fascinating. 17 different steps that you take to get to 1 perception. [Laughing] You can interrupt that process of perceiving by being able to witness like this emotion that I'm having, the feeling you have before the thought. And so this is actually not a passive thing to engage in. This is active. The way I talk about it is a little kid running up and down grocery store isles with a stick, like making all the cans fly. He's having a great time and you hear his parent kind of go "Johnny, stop doing that, okay?" And then you get kind of worried, like, "Okay, nothing's going to happen here, right?"

Dr. Dan (18:17):

Yeah.

Dr. Keesha (18:17):

When you see a parent go and get down on their knees and take Johnny by the shoulders and say, "Hey Johnny, this is not how you behave in the store. If I see do this again, here are the consequences. Right now, I'm just going to show you how to pick this up and you're going to clean all of it up." Right? That's like this interfering with bad behavior and retrain. We can do that with our emotional world. We don't have to sit and stand and watch it just happen.

Dr. Dan (18:46):

Keesha, you know, I was very sick. It started in 1999, 2000 and I was very, very sick for a 4 or 5 year period. Again, here's my perception shift, right? Everything I teach today, I'm sitting here because of that illness. And it was unexplainable and it ended up to be major mercury toxicity that I bioaccumulated through my years. But after I got better, I realized I was extremely chemically sensitive and mold sensitive. To the point where life was becoming really hard, I would be feeling absolutely normal and then I would sit in a cab with an air fresher and just be blown out the rest of the day. Brain fog, irritable, anxiety. I could tell that story with someone's cologne, perfume. I realized—I had to realize at a certain point, there's a place in your limbic part of your brain. That's the primitive part, survival is its number one priority, make you survive.

Dr. Keesha (19:53):

"I'm gonna be okay."

Dr. Dan (19:53):

Yeah, exactly. So, when I was so toxic at the cellular level, it was trying to save my life. Those memories are there. No different than if a lion walked in the room. I have some memory stored in the parahippocampus, in that limbic part of my brain that says, "That could kill me." And my brain goes, "Adrenaline, cortisol. Fight or flight. Save your life." Okay. That's a stored memory. A stove, right? Hot stove. "Okay. Don't touch." Stored memory. It's good. It's a good thing. But the problem is, is that chemicals made me sick. So therefore this part of my brain was like, "I'm going to save your life, trust me, chemical, chemical." And it would just send up all of this response and this sympathetic reaction. So people would say, "Ah, it's all in your head." Oh no, it was physical all right. But I had to start to—

Dr. Keesha (20:45):

But it was all in your head!

Dr. Dan (20:45):

Oh yeah, it was. Correct.

Dr. Keesha (20:45):

Isn't that interesting? [Laughing]

Dr. Dan (20:51):

Isn't it interesting? Yeah. And by the way, so is where it all started. I had major fillings.

Dr. Keesha (20:57):

All in the head!

Dr. Dan (20:57):

It all was in my head the whole time, the doctors were right. But the fact is, is that I had to reprogram that. But here's the thing I kind of—when I was getting sick, my bucket was so full of chemicals it was impossible to reprogram. 'Cause I was trying—'cause I read some Caroline Leaf's work, etc, but it was when I got my cellular detox work that I got my bucket down. Then I was able to reprogram it and not have the overreaction. But that's how powerful what we're talking about is.

Dr. Keesha (21:29):

Which is why you can't do one at a time. I talk about 4 corners of the puzzle the same way as you talk about the three legged stool. You can't address them in a linear fashion.

Dr. Dan (21:40):

Yeah.

Dr. Keesha (21:40):

You have to be taking this stuff on at the same time because they're interdependent.

Dr. Dan (21:45):

That's why when people say, "Oh, you just have to fix your gut first." I go, "Really?! Because I deal with clients all over the world who we couldn't—they've done everything for their gut. We couldn't fix their gut until I dealt with these upstream stressors."

Dr. Keesha (21:57):

And what we're not talking about is changing your mindset. That's the other thing that I hear all the time and I'm like, "No!" Like this is not just changing your mindset and saying, "Well, if I think I'm going to be healthy, I'll be healthy." You actually have to get in there. Change the way your nervous system reacts, but also get your chemical bucket down, get your gut healed. All of that has to happen at the same time.

Dr. Dan (22:22):

Yeah, absolutely. And again, it's a multitherapeutic approach, you know? It's funny, when I teach doctors, I run the same thing when I deal with oftentimes a client, a person, a patient. Everybody says—just thinks that there's this one thing.

Dr. Keesha (22:41):

Yeah. They're all looking at one smoking gun.

Dr. Dan (22:44):

The doctors do the same thing. You know, there's just that one thing. And it's like, "Well, it's not so easy if you look at how you got sick." Remember, it's a three legged stool, it's not one thing. So to your point, you have to deal with it simultaneously.

Dr. Keesha (22:59):

Yeah. So, the 5 Rs?

Dr. Dan (23:03):

Yeah. The five Rs—I had just got done lecturing somewhere to a group of doctors. And I know when I connect with an audience, and I know when I don't. I'm so excited about the science around some of these things. I could tell they just weren't as excited as me. So there was a level of frustration as I was on the plane ride home. I literally prayed, because I was frustrated. I don't even remember what I prayed, but I remember praying. I remember the thoughts coming into my mind. I remember digging for my tablet and then there it came, and it just started coming. That was how the five Rs was born. I always say that I can't take credit for it. I'm not smart enough. It's like—but it was divine and I say that honestly and truthfully.

Dr. Keesha (23:54):

Yeah.

Dr. Dan (23:54):

'Cause I've been in rooms with really smart scientists and they go, "My gosh, that is absolutely brilliant because that is exactly what's happening at the cell and why people are so sick today." I'm like—yeah, I'm just not smart enough to think of it. But R number one is the obvious. It's you have to remove the sources for all else to work, right? I mean, if we don't—if we have silver fillings that contain 50% mercury in our jaw and we're trying to get mercury out of the brain, that's pretty silly because it's going right across the blood brain barrier every day, every day. So the point is, remove sources. R number two is regenerating the cell membrane, and I made the point here's where these receptors are. Bruce Lipton says he believes that all of your innate intelligence lies in here. You have to regenerate this. His work showed that when you regenerate the membrane, you can actually turn off genes. When you regenerate the membrane, you can actually fix hormones. When you regenerate the membrane, you actually develop new proteins. So he believed the membrane was everything. And, you know, my work on that was even before I ever read anything that Bruce had written about. I've been blessed to interview him several times and I love his work.

Dr. Keesha (25:09):

Yeah.

Dr. Dan (25:09):

But it really came out of my own—trying to get my own life back, honestly. Then it was my adopted son who was on the autism spectrum. So my work on the cell membrane is just—I could do a whole hour, many hours of lecturing on that topic. R number three is you have to restore the cell energy. It sounds kind of simple, but it is the only way to actually detox the cell. And by the way, same with the

membrane, you can't get this cell to detox. My saying is, is that you have to detox the cell to ultimately get well. But you can't do it without fixing this membrane because it's what allows everything good in and bad out. So an inflamed membrane is—I don't care how many colon cleanses you do. I don't care how many liver cleanses, saunas, you do. That membrane, critical. So real detox has to be at the cell. And my five Rs is kind of that roadmap for that, as well as just healing in general. But the energy of the cell is a critical component of turning off genes, detoxing the cell. You can't make glutathione in your cell, which is one of the ways your cells get rid of toxins without enough cell energy. So it's a tipping point for everything. And then, I said I was in a room, it was myself—I don't know if you know who Zach Bush is—and it was Joe Mercola, actually. And there was like 4 or 5 others. There was a bright, bright biochemist in the room. His first name is John, and he said, "Look, the key to detox—"'Cause we were on the detox conversation. He said, "It's cell energy." I said, "That's my R number three." And I turned to Joe, he's like, "This is R number three." So it was like, scientists get it, right? Restoring cell energy, pivotal. R number four, I think is the obvious. You have to reduce the inflammation of the cell. If you don't, then again, it's that tipping point to everything else. And R five has become popular, but not one I actually made popular the five Rs. It's you have to reestablish methylation pathways, which link to glutathione pathways, which link to turning your genes on and off. When your methylation gets depleted from physical, chemical, and emotional stress, that's what gets hit, is your methylation. But now you can't detox a cell and genes get turned on. So we have to reestablish methylation to turn genes on and off. They act as the switches that turn genes on and off. So when you put all of those Rs together, it really is the answer to that first leg of the stool.

Dr. Keesha (27:48):

It's interesting because methylation has been sexy for a while now. And people will really zoom in on like MTHFR C677T and 1298 as the only methylation. Right? Those are the buzz words. It's so old news.

Dr. Dan (28:07):

It is so old news.

Dr. Keesha (28:07):

I was on an airplane with Ben Lynch and I said to him, "You kind of screwed everything up, right?" He goes, "I know." [Laughing]

Dr. Dan (28:16):

You know what? Here's the thing. All of the SNIP pathways, people were paying a lot of money for those tests. Where's it gotten us, really, in helping people? Really not very far because our genes—they're our genes. They're clues, but there's so many epigenetic pathways around these SNIPs.

Dr. Keesha (28:36):

Well, I call them the treasure map. I like doing genetic testing so—

Dr. Dan (28:39):

They're clues! They're clues.

Dr. Keesha (28:39):

Often you have to dig a little further, but you can over methalate somebody. And to your point, if those receptors are not working properly, or if you've got no energy in your mitochondrial function, then if you start over, methylating you're gonna get in trouble.

Dr. Dan (29:00):

Even the over, under methylation thing is so complex because some people who are under—methyl depleted are actually, when you give them methyl groups, they over methylate because they're concentrating them in one area, not another area where they're under methylating. It's a very complicated situation. I mean, as well as all of the pathways, if we use them for clues, it's awesome.

Dr. Keesha (29:22):

Right.

Dr. Dan (29:22):

If it were only so simple, "Oh, here's your generic pathway. Eat this, take this, do that." It's not so simple.

Dr. Keesha (29:28):

Well, and I always say, you never treat the SNIP because that's just on the pirate map. You have to actually dig deeper down, right? It's just a place where you need to start looking.

Dr. Dan (29:38):

It's a clue.

Dr. Keesha (29:38):

I think every one of us is individual and that bioindividuality, when we forget it and try to make little cookbooks, it doesn't work.

Dr. Dan (29:47):

Yeah.

Dr. Keesha (29:47):

That's where Western modern medicine has gotten to. And it works if you're having a heart attack or stroke. I'm going to be nowhere else than in an emergency room within 12 hours of a clot being found and saying, "Please, I would like to have an IV clot buster. Thank you."

Dr. Dan (30:03):

Yeah, me too.

Dr. Keesha (30:03):

"I'd like to maintain this brain function as long as I can." Yeah. [Laughing] So, I mean, but that's acute. What we're talking about is something that's preventative and reversing chronic stuff. Right? Which the American, kind of industrialized, Western model doesn't have a place for that.

Dr. Dan (30:23):

Yeah. So true.

Dr. Keesha (30:25):

Well, I appreciate you sharing just a fraction of your wisdom in this time, and we're going to have our information about how to find you and I think you have a free gift for our audience?

Dr. Dan (30:37):

Yeah. I think that they were talking about—

Dr. Keesha (30:41):

Asking fat burning secrets. I'll just, yeah.

Dr. Dan (30:45):

Yep. Exactly. That's a document that I've given away and people love and it absolutely leads into so many of the things I'm discussing and that's why they thought it would be a good idea.

Dr. Keesha (30:56):

So let's just spend a couple of minutes talking about that because we're sort of leaving two sides of the thing with no bridge. Right? So, the role that ketogenesis or fasting actually plays in the three legged stool and the cell that we just talked about.

Dr. Dan (31:16):

Yeah. So this leg of the stool right here, the microbiome, the gut, if it was only so easy as to give someone a probiotic.

Dr. Keesha (31:29):

Or L-glutamine.

Dr. Dan (31:30):

Or L-glutamine. Right. I mean, we know the ones. It's not that there's anything wrong with any of it, you know? Well, sometimes there can be, because one of the first things I tell my docs to do is ask somebody how long they've been on their probiotic. Typically it's months and years. Change it, because they're probably, monoculturing. One of the benefits that we've gotten from all of the new microbiome testing wasn't like "Oh, you lack these bacteria here. Oh, you have too many of these guys here." No, that didn't happen, but we were able to see the diversity of the microbiome is huge.

Dr. Keesha (32:08):

Essential. Yeah.

Dr. Dan (32:08):

If we look at someone healthy versus someone not, we see diversity versus non diversity. So then the question really becomes, how do we get a more diverse microbiome? And it really is stressing the microbiome, just like you would exercise to become more fit. We stress it. We don't overstress it. That's an issue too, but we stress it. Then we watch the adaptation come via a more diverse microbiome. So how do we do that? Fasting and fasting principles. A fast could be partial fast, where you reduce protein and calories in a day's time. Fasting could be just water. Fasting could be every day where you just fast for 15, 18, 20 hours. Fasting, it could be five days. So fasting strategies are a strategy that I've taught for many, many years. Fasting I've taught since the 1990s. So my book is Beyond Fasting, that's coming out and it really is how to do these strategies and strategies like this. Even what I call feast famine cycling, where you feast, and then you famine, you feast—it stresses the microbiome, creates diversity. It's really how we fix a destroyed microbiome. So it's not what you think, right? I mean, do I utilize a

rotation strategy with certain bacteria? I do. But I couldn't fix a gut without these stress strategies around fasting and the peace that we're talking about, that's what I discuss.

Dr. Keesha (33:42):

It's always fun to find out that the probiotic that you spent a lot of money on and have been taking for a really long time is actually eating pathogens and making them stronger. [Laughing]

Dr. Dan (33:52):

Yeah. When you look at people with gut problems, so many of them have SIBOs, small intestinal bacterial overgrowth. Unknowingly, right? I mean, it's like they think it's just food allergies, 'cause they're bloating, this and that. It's SIBO and probiotics make it worse typically. They're putting more bacteria in their small intestine when it belongs in the colon. That's a whole other topic for another day!

Dr. Keesha (34:14):

Yeah. Another topic, but a quick little cliff note version to that is make sure you know if you have no stomach acid. [Laughing]

Dr. Dan (34:22):

Very true.

Dr. Keesha (34:23):

Thank you so much. I really appreciate you spending your time and wisdom.

Dr. Dan (34:28):

Yeah. Thanks for having me.

Dr. Keesha (34:30):

All right, everybody. Until next time, be well.