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Dr. Jill 00:01

Welcome to *Resiliency Radio*, your go-to podcast for the most cutting-edge insights in functional and integrative medicine. I'm your host, Dr. Jill, and with each episode, we dive into the heart of healing and personal transformation. Join us as we connect with renowned experts, thought leaders, and innovators—all those people at the forefront of medical research.

Dr. Jill 00:19

I'm so excited today to bring you my guest, a friend—we've been in the same circles and [have been] getting to know each other better—Dr. Mel Schottenstein. Did I pronounce that right?

Dr. Mel Schottenstein 00:29

You're close. Schottenstein. Yes. [laughs]

Dr. Jill 00:32

Schottenstein. Thank you so much. [laughter]

Originally from Cincinnati, she studied Women, Gender, Sexuality, and History of Science and Medicine at Harvard University for her undergraduate. Interested in learning medical skills and meditation to promote cultural competency among healthcare providers, she completed a Master's [degree] in bioethics at the University of Pennsylvania. She then acquired a naturopathic medical degree at Bastyr University in Washington. While in school, she received additional training in biological medicine under the direct tutelage of Dr. Thomas Rau, whom I know and respect deeply. He was the Chief Medical Officer at the Paracelsus Clinic in Switzerland. And I've been involved with them too.

Dr. Jill 01:10

Additionally, she completed training in neurotherapy, biofeedback, homeopathy, and naturopathic oncology, which we're going to talk a little bit about today, naturopathic gastroenterology, BHRT—that's bioidentical hormone replacement therapy—botanical medicine, compounding, environmental medicine, and IV. Oh my goodness, the list goes on. I love it. You are so well-trained. We talked in the beginning about curiosity. You clearly love to learn like me.

Dr. Mel Schottenstein 01:37

I do.

Dr. Jill 01:40

I keep having amazing guests like you. One of the things I see that's common in the ones who think outside the box and who are changing medicine is that curiosity. If we graduate from our training and are like, "Okay, that's all I needed to know," and go do the practice... But the truth is, I'm guessing you love to learn for the sake of learning.

Dr. Mel Schottenstein 01:57

I do. I love to learn. But the amazing thing is that after I learn something, it's almost like you just put it on the universe, and then I come right back and there's the person who needs that exact thing that I learned. It's funny how that just works with fate.

Dr. Jill 02:12

It is. And you're so right. Often I'll have an article or something I just read and then this person comes in and I'm like, "Oh, I just yesterday read this study." That's amazing.

Dr. Jill 02:24

I love starting with guest stories. You have quite a degree from your undergraduate at Harvard and all those topics that I read and mispronounced and then all the other degrees and the naturopathic medical degree. Tell us: Did you always want to be a doctor? How did you get into medicine?

Dr. Mel Schottenstein 02:41

Actually, no. When I was a child, I was born with a chronic illness—they called it chronic idiopathic pseudo-obstruction—and mitochondrial disease and a form of dysautonomia. Essentially, none of the doctors could figure out what was going on. My health got worse all throughout my childhood. By the time I was a teenager, I was pretty much just given a death sentence by the doctor, saying: "You probably won't live past the age of 30. All we can do is get you on medications to balance your health and that's it."

Dr. Mel Schottenstein 03:11

And I said: "That doesn't really make sense to me. If my problem is mitochondrial-based and I'm not producing enough mitochondria, why can't we repair the mitochondria and bring more into the system and get better from that?" I said: "It doesn't make sense why I have to be on medications forever and my system will ultimately fail from not being treated." So they said: "I'm sorry. There really isn't anything like that that exists out there." So I said: "That doesn't make sense."

Dr. Jill 03:40

And how old were you when you were asking these questions?

Dr. Mel Schottenstein 03:44

Fifteen. I think that because I spent so much time in the hospital, I started pushing back on the system, even as a kid. I still even remember when I was five years old, I was told, "You have to eat these special crackers." I said to them: "All right, if I'm to eat them, I have to know why and what it's actually doing." I would constantly push back on all the doctors, telling them: "Why? Why is this important? Why do I have to have this? Why do I need to do this? What's it doing?" That's where I'd run into the roadblocks.

Dr. Mel Schottenstein 04:25

I was seeing this one renowned cardiologist, and he said: "Mel, it's not really about why. Let's just treat your symptoms." I said: "Well, that's not fixing the problem. Shouldn't we fix the root of the problem and repair why I have the problems versus just sitting back and treating symptoms? That doesn't seem like it's solving the problem." He said: "I think you need to go to a psychologist or psychiatrist to work through that."

Dr. Mel Schottenstein 04:54

So I said to him: "All right, if I'm to go, I want you to give me five studies of babies born with psychiatric disorders causing mitochondrial [dysfunction] or some type of dysfunction inside their body." He was like, "What do you mean?" I said to him: "If I've had this since birth and it's some sort of dysfunction that's happened because of whatever genes have been turned on, then obviously it's not a psychiatric disorder. This is something that's been manifest inside my genes since I've been a kid" because of whatever it is that my parents have been exposed to or my system

for some reason was born that way, dysfunctional. He said: "I can't produce those studies." So I said: "And therefore I won't be going."

Dr. Jill 05:39

Mel, I love this! You were literally being the functional medicine expert at five years old and on—or an integrative, personalized [medicine expert]—saying, "I want to know why." That's amazing insight, as [you were] such a young person. No wonder you're where you're at. That blows my mind.

Dr. Mel Schottenstein 05:59

I was still managing school as a kid and trying to go to school while being ill and then ultimately graduating. I was still not optimal where I was, but I was already on the path of trying to discover for myself where I could start rehabilitating. I started finding out initially that if athletes were going to have optimal athletic performance, you can build up your mitochondria, you can build up oxygen stores, you can rebuild your cells. So I figured, why couldn't I?

Dr. Mel Schottenstein 06:32

I started doing oxygen therapies, IVs, acupuncture, and a whole variety of treatments and herbs and changed my diet radically. I got rid of gluten and dairy, made it [a] highly plant-based [diet], and tried to promote healthy metabolism and nutrients. And then I just started doing better and better over time. By the time I was in my 20s, I would say I was already dropped off of 90% of all my medications. Then in my 20s, finally, I completely got off of everything.

Dr. Jill 07:06

Dr. Mel, I love hearing your story. I'm so glad we started with that because that's profound. I want to give a picture because I think your story is not so different from the listener out there who's suffering from chronic fatigue or any of these [illnesses]. What was it like at 5 or 10, in grade school or middle school? What did you suffer day to day? Give us a little snapshot of what your life looked like before. And then obviously, after, you've been thriving. Give us a before and after snapshot.

Dr. Mel Schottenstein 07:30

Before, I was missing days constantly of school, trying to play catch up. In high school, when we calculated the total number of days I missed, it was equivalent to one full school year. In the end, I did high school, if we're talking about actual

attendance—three years of actual attendance. I didn't want to graduate behind my class, so I learned to be able to do work and all of that while I was in the hospital while I was unwell because otherwise I was going to get behind.

Dr. Mel Schottenstein 08:03

But I did find, unfortunately, that there were teachers that didn't understand. They would start saying, "Oh, well, you're using this as an advantage to get ahead" and "You're using this as an advantage to take more time on your projects" and things like that. It would blow my mind that here I'd be home so sick that I could barely get out of bed because I was so dizzy, my blood pressure couldn't be regulated, and they would think I'm out having fun. I wish I was doing that. But it just amazed me endlessly. That would happen throughout elementary, middle, and high school—all of that.

Dr. Mel Schottenstein 08:44

Then finally, when I graduated, my health was still not where it needed to be. My parents were still pretty concerned to that point, so my mom went away to undergrad with me. Our deal was that she would come. I'd go where I wanted to go, which was on the East Coast to Harvard. But for me to go there, we had to travel back home because my sister was still in high school at that point, so we had to keep traveling back home. But I felt that was a fair exchange for me to be able to go where I want to go and study what I wanted to study. But I got better during that time. By the time I got off to naturopathic medical school, my health was in such a good place. I didn't need any help at that point and wasn't missing days for being sick anymore.

Dr. Mel Schottenstein 09:36

After I graduated one school program that I was at—because I originally thought it'd be dental school I was going to go to—in dental school, I gave them all the information about my health to begin with and said to them: "This is the first time I've ever been in a rigorous program like this. I don't know how I'm going to feel." I was given the worst schedule possible at that school. It turned into a disaster going to the ER and all of that because my body couldn't handle the stress of it. My parents stepped in. Ultimately, they said: "Well, I'm sorry. I think this just means that you're not suited to go to this school. This just means that you obviously don't

have a passion for it." I had to bring in a lawyer because they were violating the Americans with Disabilities Act for not trying to work with me this time.

Dr. Mel Schottenstein 10:27

But I decided: That's okay because I believe in faith and I believe that if you get presented with an obstacle, it doesn't mean that you have to keep pushing and pushing and pushing that; it means that maybe you need to reevaluate where you are and think about the lesson that you're to learn from this experience and then decide the path that you're to go. And that's what I did. I thought about it and I realized: "You know what? If anything, there's a blessing in this too—because now it just means I'm going into a different path—because my passion really is holistic medicine."

Dr. Jill 11:00

Again, unbelievable. I see a couple of patterns that I think are worth pointing out. Number one, your family, your mother, that dedication. Granted, you had the grit and the will to survive, but that is profound that you had that kind of family support for her to go with you. And Harvard is no small matter. Let's just point out that you went to Harvard [for your] undergraduate [degree]. And I had a list of the things you studied there. That's amazing.

Dr. Jill 11:26

The other thing is the word I just mentioned. We know from the studies that there's one thing that is most associated with success, and that is grit. And you have it clearly. But what's profound is that grit—I know I've been through stuff too and I feel like I have that same passion—doesn't come from an easy life. It comes in the terrible, difficult suffering that you went through, and in different phases in my life, I went through too. It's only in those times that we find what we're made of and that we really overcome these crazy, insurmountable obstacles. And then I think it gives us courage because the next time it's like: "Oh, well, I've done this. Now I can do that next thing that comes." And we continue to build our strength and our grit. And I see that from such a young age. And then, like you said, what a beautiful thing that you got turned down because you would have made a great dentist, but you're, I bet, a much, much better naturopathic physician.

Dr. Mel Schottenstein 12:19

Thank you. I think that in the end, we end up where we need to be. And I really, truly believe that whatever it is that we've been exposed to or whatever path we're on, it's up to us to take that as a learning experience versus being swallowed up by it.

Dr. Jill 12:37

Yes. We talked before coming on, and I said: "How did we connect? I can't remember." We said that a mutual patient introduced us and said: "Dr. Mel, you've got to be on the podcast." Now I know why because I'm like: "Oh, we have such a similar view of life and story and passion for learning and helping and healing." Amazing.

Dr. Jill 12:37

Our title today, our topic, is called "Targeting Cancer by Rebalancing the Biological Terrain". The listener might be like: "Cancer and mitochondria—what do they have to do with one another?" You and I know there's a deep connection with what you went through and now what you're doing. Do you want to make a connection between those two things and why the mitochondria—and then we'll go on to talk about all the other terrain factors—might actually matter to cancer?

Dr. Mel Schottenstein 13:18

Absolutely. The way I like to describe it to anyone I work with is that we have like little organs inside our cell. One of the organs is the mitochondria. That's responsible for our energy. It is also responsible even for genetic information that gets turned on and off. If we've been exposed to something that's toxic in our environments or even something that's part of our occupation that we've been exposed to that's toxic, any of those things can alter some of those genes, activate things, turn them on, and make the mitochondria sick. Maybe it's not producing ATP in the same manner. Maybe metabolically, it's altering how we use energy. That is the key area that we have to fix.

Dr. Jill 14:06

Yes, it's so crucial because these mitochondria people kind of take for granted. And you certainly couldn't because you rehabbed the mitochondria. But they do affect every single system because every organ contains them. And they are little energy

powerhouses so they create the currency that allows us to get up and go and do our things.

Dr. Mel Schottenstein 14:26

Breathe too. Everything.

Dr. Jill 14:28

Yes, like all of the processes. So clearly, you understand mitochondrial rehab. Maybe before we go into cancer terrain, let's just talk briefly because fatigue is so epidemic for many people, and at the core, one of the key components is mitochondria. You learned how to rehab your mitochondria. Take us through an outline of how to rehab the mitochondria.

Dr. Mel Schottenstein 14:50

Sure. I think the most crucial things are: Be on a super-nutrient-dense diet. That's number one. I try to have people get the most nutrients they can from food. I'm not a lover of taking a giant handful of supplements, because how much are you really going to absorb in the end? Be as diligent as you can with your diet, like high plant-based foods. Try to get the best quality foods that you can because anything that's exposed to a pesticide... unless it's on the clean versus dirty list. That's what you want to focus on if you're trying to avoid paying for organics, that is.

Dr. Mel Schottenstein 15:31

So diets, oxygenating therapies. That was a big thing for me. Stuff like hyperbaric, ozone. Any way that you can bring oxygen into the cells. EWOT. That's exercise with oxygen therapy. It doesn't even have to be a lot. For example, EWOT 15 minutes, 3 times a week. It seems so basic, but that is even what von Ardenne found for his research—even the bare minimum that you could do to start rehabbing metabolism inside the body.

Dr. Jill 16:02

And is that wearing oxygen a few liters while you're walking or doing a workout?

Dr. Mel Schottenstein 16:07

Yes, exactly. There's that.

Using things that are supportive of the mitochondria in general. What are the components that the mitochondria need to function? CoQ10, for example, ribose, carnitine. Those are basic things. And some of those are harder to get from your diet, especially if you're not going to eat organ meat, which I'm guilty of too; I don't eat it. But if you don't, then you're going to have to find other ways to get it inside your system so the mitochondria have the basic nutrients to do so.

Dr. Jill 16:43

Years and years ago, I realized I have a genetic defect in the second complex of the mitochondria. I've been on lifelong high-dose B1, B2, and [inaudible]. And now it's just a standard thing. I don't think about it, but I remember there being a big shift in everything about my health when I looked at the mitochondria in a detailed way.

Dr. Mel Schottenstein 17:00

Yes. Now think about if you weren't getting those nutrients and just basic nutrients that we take for granted in our diet. That's even when I tell people who are like, "How is this vitamin even going to make a difference?" I'm like, "Let me show you a picture of what happens during metabolism." Think about all those places in your metabolism that get blocked the moment you don't have a certain B vitamin, you don't have CoQ10, or your NET levels are too low. Think about where blockages occur. It's so many places. You can see where the system has shut down just without having things.

Dr. Jill 17:38

Yes, gosh, I love that. Is there a certain workup you do for, say, fatigue?—because fatigue is the most common thing we get, and it could be multifactorial. But clearly, there's often a mitochondrial component. Say you have a 45-year-old woman who walks in with fatigue. Where would you start to look at her testing or check out her mitochondria?

Dr. Mel Schottenstein 17:57

The very first thing I do is find out about toxic exposures because I find [that for] so many people, their problem is they've been exposed to something that has already made the mitochondria dysfunctional. It could be they are heavily vaccinated and they've had problems there. Maybe they cook a lot with Teflon and they Scotchgard their house all the time. Maybe they work in a chemical company, or maybe they

garden and use chemicals when they're gardening. Even EMF, for that matter, is going to alter mitochondrial function.

Dr. Mel Schottenstein 18:40

In each of those cases, I try and find out: What is it that caused that's it to go dysfunctional to begin with? From there, we might do testing to find out if you're missing certain vitamins, how you're methylating, and where things are in that realm. But yes, it's amazing the number of times when it is associated with something that's from our environment.

Dr. Jill 19:01

Okay, I love that you're going here because the environmental toxic load is my spiel. All of us, right? If you're looking and curious and aware, there's no other elephant in the room that's bigger than the environmental toxic load that we all inhale and breathe and eat and drink every single day. What would be some practical day-to-day tips? I always feel like people think that they have to go on a 21-day detox. Well, that's great. The truth is, it's just daily inputs. Like you said, the kinds of cookware and the kinds of things we put on our bodies. Do you take people through the basics of detox 101? What would that look like for you?

Dr. Mel Schottenstein 19:39

It'd be: What are you using for your hair, for your makeup? What kind of soaps do you have in your house? What kind of detergents are you using? How often do you eat fish? Are you regularly getting vaccines or are you not? What kind of toothbrush or deodorants do you use? It's understanding their daily life. Plus, even when they go to the grocery store, are you eating mostly processed foods? Are you buying stuff mostly in glass jars or cans or are they wrapped in plastic? What are they doing day to day? Because those day-to-day things are, 99% of the time, the big exposure that the people have.

Dr. Jill 20:26

Yes, this is so relevant. I love that you're saying that because often, like I said, people think they need to go to a big detox clinic. You and I both have familiarity with Paracelsus, who does apheresis and all these amazing therapies. They clean the blood. But I remember Dr. Walter Crinnion, who I'm sure you know as well. He would quote that 80% of our environmental toxic load is the air that we breathe. That was always a shocker.

Dr. Jill 20:50

But it relates to my other favorite topic, which is mold. And I'd love to talk to you about this. I just realized recently—we've had the fires in Arizona where you live and with me in Colorado—that air quality, as I looked at the meter readings, those small particulates 2.5 and below, which just go directly into our alveoli into our bloodstream, are so small that they don't even need transport. The big particulate is not so toxic; the littler it is, the more toxic.

Dr. Jill 21:16

All that to say, I tested indoors on the really bad smoke days, and it was pretty low because I have a ton of air filters. Then I went outside, and within seconds, it went 5 to 10 times normal. I was like, "Oh, no wonder we're all tired during these fire days." Then I see people running with the smoke. I was like, "Oh, please don't run when the fires are there." So the air that we breathe—mold, particulate—what are some things people can do with air quality?

Dr. Mel Schottenstein 21:42

Air quality—have a good filter in your house. That's one of the biggest things I tell people to do. If there's any risk for mold, then I have people for sure test it inside their house. But otherwise, yes, definitely get a really good air filtration system. That is super important. Without that, then you're going to be exposed to this regularly.

Dr. Mel Schottenstein 22:05

I see a ton of people, especially firefighters, who are exposed to a lot of the PFAS chemicals with even just the foam that they spray on the fires. What we breathe is so impactful in terms of what gets into our system. You think about that small barrier and how fast it can go from the alveoli into our bloodstream. Once it gets into our bloodstream, now you have this circulating through our system.

Dr. Mel Schottenstein 22:33

Imagine chemicals like Teflon circulating through our blood and/or you having any type of mold circulating through your blood, any of it readily. Then you think: "Now that's going to go across the blood-brain barrier—all the things that that can cause, how it affects the nervous system, how it's affecting the GI system." Once it's in the

system and it's circulating, that's why these conditions end up being so multifactorial and affect so many different systems. Then people are like, "I have to go to" X, Y, and Z "specialists because I have all these things going on." But really, it's one thing that's causing it. It's all about the root. It's, what were you exposed to? What's the root cause that's causing it?

Dr. Jill 23:15

It's a great synopsis.

Let me tell a really funny, quick little story. Again, the wildfires about a month ago that were here were really bad. I measured the particulate; it was bad. Before I started measuring, though, there was one particular night I got home from work. My typical habit is to eat dinner and then go for a long walk in the evening. I love walking. I knew the air quality wasn't great, but I was like: "What's a 30-minute walk or a 45-minute walk going to really do?" So I went outside and walked. I was a little tired and went to bed. No big deal. I woke up the next day. I was late for work, which was the first time in like 10 years. I overslept. I felt hungover. I don't drink, but if I had drank maybe a bottle or two of wine, that's how I felt. And I was like: "What in the world? Oh, I am so toxic from..."

Dr. Jill 23:55

If you think about me as an example, I'm walking out there, and then that day I measured, and the particulate, like I said, was 5 or 10 times [more]. So I was walking in this terrible air. It was going directly into my blood. I completely got so toxic and overwhelmed—my kidneys, my liver, all of my filtration organs—and I woke up feeling so sick. I took glutathione. I drank a ton of water, electrolytes. I took some charcoal. I felt much better in a couple of hours. I thought: "Oh, surely one evening walk—otherwise I'm indoors." And it was so profound. I felt worse than I had been with a mold exposure. Then I thought, "People need to know this." And that's just one thing compared to mold in your house every day or all these things. It's like the analogy of the frog boiling slowly in the pot.

Dr. Jill 24:40

How do you bring awareness? I'm assuming most people who see you are interested and want to know what you have to say, but are there ever people who are like, "Oh,

it can't be that big a deal"? What do you tell them if you need more buy-in for some of this toxic load?

Dr. Mel Schottenstein 24:52

That makes me think of this one person I saw a couple of weeks ago. He said, "Mel, if I get rid of the vast majority by not doing this one thing..." He was getting exposed to really toxic air. The place had mold. He said: "Isn't a little bit okay, but a lot's the problem?" I said: "No, it's not about limiting your exposure and [to] keep going back to the same problem and making yourself sick again. You're going to keep making yourself sick every single time. What's it doing to your liver? What is it doing to your system?"

Dr. Mel Schottenstein 25:34

He said: "Okay, I get it. I figured it was something where I could just have a little and it'd be okay." Like the difference of people saying if they have a food sensitivity that they could have a little bit and then they'll be okay, but you're still causing a reaction in your body. Why do it?

Dr. Mel Schottenstein 25:51

What I recommend to people is that if you know where there's a problem, then stay away from it or rectify it. Some things, obviously, if you work in that environment, it's very hard for you to go ahead and fix that. I've had to write a few notes for people for their office, for the owners of the business to agree to do testing, and then they found the testing and there was mold in a certain place. They were like: "Oh, okay. Fine, we'll remediate it." But yes, sometimes it is a little bit of arm twisting to do that for owners. People need to be vocal. They need to say: "I'm unwell. I have these issues going on. I really need to test my work environments so that I can make it safe for me to be here." Be your advocate.

Dr. Jill 26:39

It's so important. And I love that we as physicians can partially be the advocates to say: "No, this really, really matters." I think maybe 20 years ago, when I first started medicine, things were a lot less complex. If I'm looking at the patterns that I've seen over my 20 years of practice so far, the elephant in the room, as we started off with, is that this environmental toxic load is exponentially increasing. I think that's the biggest factor.

Dr. Jill 27:04

Now, our topic is cancer. We haven't even talked a lot about that, but people don't realize everything we're talking about has to do with this. So let's pull this into the terrain. Talk about: What does that really mean? Again, some of this we've already talked about because everything we've already said has to do with cancer, but can you link it up together for the listener?

Dr. Mel Schottenstein 27:18

Sure. The terrain is like the environment in our body. If the environment in our body is sick, it is going to make our cells sick, and it's going to prevent our body from repairing itself. The analogy I give to people is: Think about a planet. It's like planet Earth. We pollute the planet. We throw plastic in our waters. It affects the animals. Many of the animals have gone to extinction. We are making our planet sick, so to speak, no different than our bodies that are exposed to these same chemicals or the same pollutants. And we are making those cells, the environment, the microenvironment, and us unwell.

Dr. Mel Schottenstein 27:57

When you make that environment unwell, what are you doing in terms of your genes? Possibly turning things on that shouldn't be turned on, possibly changing how your body is able to detox and making the whole environment unwell. So it's creating an environment that cancer wants to thrive in. Maybe it's more acidic. Maybe it's not as much oxygen. Maybe the chemicals themselves are such strong disruptors that it's promoting so much mutation inside your cell that it's causing the cells to continue mutating.

Dr. Mel Schottenstein 28:30

I find this to be such a huge role because, one, we're all exposed to stuff inside our world, but it depends on how your body is able to handle it. If it gets overburdened, it's no different than a barrel of water that keeps getting full, more and more water until finally it's overflowing. It doesn't even matter if you have a hole on the side to drain some of it out; it's way overflowing. It's more than our bodies can even handle. We have to get that under control.

Dr. Jill 29:00

That's such a great way to put it—the bucket, the barrel. And I think Dr. Ray, one of your teachers, used to talk about that. We all can credit some of the shoulders we stand on. But the truth is, it's such a great way for people to picture—for patients that we're talking to—because what I always say is that all of a sudden, when they come to see me, usually they're drowning in the bucket. And while you and I might test for environmental toxic load, the truth is I don't feel like we have to know every last one. We just have to bring that water level down with all the things that we know to do. Then all of a sudden, when they're here, they have that margin back. The body is so powerful to heal if we just give it back a little space. Do you find that to be true? Any comments?

Dr. Mel Schottenstein 29:37

Absolutely, yes. I don't think it's that we have to get to absolute zero. I think once you even get that 20%, 30%, or 40% back, then people feel the difference, like, "Wow, I feel like I have more energy; I feel overall clear," and even the body is starting to respond better. Now think about the immune suppression that you're getting from a lot of these exposures too. If the immune system can't recognize cancer and cannot see it, then you're just creating that environment that it's going to thrive in. If you can clear just a little bit more and a little bit more out, then the body has the ability to start bumping up the immune system to start feeling better. The mitochondria are starting to repair themselves. Then you're providing an environment for the body to succeed.

Dr. Jill 30:21

Yes, it's so true. It's terrain, which is the title of our topic here.

Dr. Mel Schottenstein 30:24

Yes, exactly!

Dr. Jill 30:26

It's so good.

Say you have a patient who comes in... And I'm wondering because I've definitely treated patients that have cancer. But typically, I have them have an oncologist, and they do that, and I'm on the terrain level, like you, of nutrient support and

everything. What's your approach to someone? Let's just take a common thing, like a 55-year-old with breast cancer, maybe moderately aggressive at stage 2. What would you start with? And what would be your role in that patient's journey?

Dr. Mel Schottenstein 30:50

Sure. In that case, it depends on what their wishes are and also what their body is able to handle. I have people who do a combination of both conventional and treatments with me, some people who do just treatments with me, and I have some people who are completely contraindicated from conventional treatments too. In that case, I work with them where they're at.

Dr. Mel Schottenstein 31:12

The first thing is to find out their history. What's their dental history? That's a big part of it right there. Do they have root canals? Do they have amalgam fillings in their mouth? Do we need to be concerned about mercury exposure from their mouth or even the focal infections from the root canals? And how's that affecting the overall environment in the body?

Dr. Mel Schottenstein 31:33

From there, I talk with them about: What do they use for their regular lifestyle day to day? What do they eat? Are they eating a diet that's very high in carbohydrates? Is it a high-plant-rich diet that they're eating? Is it a very high meat-based diet? I'm not against meat, but I do think that sometimes too much can also be a problem too. Too much of anything is a problem for that matter. It's all about balance and us finding out where things are out of balance and then finding out the person's occupation because a lot of times that is a huge indicator of what they've been exposed to or even where the mental health aspect is. Stress plays a major role in disrupting the terrain. We can't ignore that part too, so that part has to be addressed.

Dr. Jill 32:29

Yes, it is so interesting. I heard you bringing in dental, and you started in dental school, so you have that background and training. And then, Dr. Ray at Paracelsus, I know that they are big proponents. I feel like that is something many naturopathics and physicians like myself miss, but it's so critical. This area is a really important

part of the terrain. What led you to learn about that? Was it the dental work? Was it the Paracelsus Clinic?

Dr. Mel Schottenstein 32:57

Definitely, the work that I did with Dr. Brown over at the Paracelsus Clinic impacted me a lot. But also, in all the years I've been practicing, the majority of every single person that I see with cancer has some sort of dental issue. Statistically, if I'm to base it even on all the people I see, it's so overwhelming—the number of people that have something related to dental [issues]—that it just amazes me each time. It still amazes me—finding the root canal, then seeing what meridian that even connects with, and then seeing how that even relates to the cancer that the person has. I can't say how many times the two correlate, and it's amazing.

Dr. Mel Schottenstein 33:46

Many years ago I had a person come into me, and she had an oral tumor. We were talking, and ultimately, it was metastasized to her liver. We were starting to talk about dental [issues], and I said: "Do you have a history of any root canals?" She said: "As a matter of fact, yes." I said, "Which tooth?" It was exactly where the tumor was in her mouth. So I said: "We need to take care of this ASAP. Clearly, that is the root of your problem." After we got that removed, it was almost like we had expedited the path towards her getting better. It sped things up so much faster. I feel that ignoring it is like ignoring a big elephant in terms of any toxic exposures people have.

Dr. Jill 34:42

I love that you said that. I have my own little story too here. I've said this before, so some of the podcast listeners might have heard me, but I have two molars—the first molars—and they had both root canals. And I had breast cancer at 25. What happened about a decade later, as I'm looking at this—I was in Switzerland when we looked at the meridians—they were tracking the same exact meridian: It was breast, colon (I had Crohn's disease right after breast cancer), and pancreas (I have pancreatic insufficiency). It was literally my health history in these two teeth that were root canals.

Dr. Jill 35:13

The moment I got it, I was like, "Oh wait." Just like you said, "This is a big deal." I went and had them both pulled. Now I have implants of zirconium, no problems. And what's funny is I was past the cancer and Crohn's side, healed for the most part, but the thing that I saw immediately within seven days was that [although] I had very severe psoriasis on my scalp, it just went away. That was a very clear link to the immune system. It's funny because, just like you, I was like: "Oh wait, this is totally connected!" It's like my medical history in a tooth, right?

Dr. Mel Schottenstein 35:42

Absolutely. Yes. I still get amazed by it every single time. And I'll have people sitting, and they'll be like: "Why do we even need to be concerned about this?" I said, "All right, which tooth do you have it?" Then I'll pull up the map, and we'll look at it right there together. I go, "Okay, it's this tooth, and it's connected with this." And they'll be like: "Oh my goodness! And I forgot to tell you I have" blah, blah, blah. I'm like, "There you go!"

Dr. Jill 36:08

That's amazing. Yes, the breasts and the Crohn's were very clear. And then even the pancreatic insufficiency—that was something I just thought I had to deal with because of the Crohn's. But then I saw the pancreas, and I was like, "Oh, that's connected."

Dr. Mel Schottenstein 36:17

Mm-hmm. Absolutely.

Dr. Jill 36:20

As we wrap up in the next five minutes or so, what else? I think we've really made a case for mitochondria, the core energy production in every cell, which has to do with the development of cancer and the immune system. They need nutrients. They need to avoid toxic load. But then the same thing for cancer and development is that environmental toxic load is the elephant in the room. Nutrients, all that.

Dr. Jill 36:40

One thing we haven't talked about, and I'm curious about your opinion, is that I feel like even if you go out and grow your own food or we go to organic sections and buy almost all organic, the depletion of nutrients in our soils and the quality of the

food, even organic, is diminished. I feel like that's one reason why we do need to supplement to some extent. I think compared to 50 years ago, even organic, locally grown good food is still more depleted. What do we do about that? And what are your thoughts about that?

Dr. Mel Schottenstein 37:08

I agree. It is a huge problem. I don't know if anywhere here in the US that you could buy food that I would say, "That's going to be nutrient rich." No, it's a big problem with how much we have destroyed our soil and overfarmed it. We have ruined the mineralization of it. Until we revitalize our soil and go back to some of the older methods of farming or even biodynamic farming, which would be the optimal way of doing it, then we're going to continue to have depleted food. But that's the problem of large agriculture too. But how do you avoid it? That is definitely a big problem.

Dr. Mel Schottenstein 37:55

Yes, we have to do some type of supplementation with people. I try to keep it as minimal as possible. But for people who are coming in with treatments and have gut issues, then we'll often bypass the gut with IV therapy just to make sure they're getting the nutrients in their system. After that point, I try to stick with stuff like powders or liquids because then the gut doesn't have to break down a capsule to utilize the nutrients.

Dr. Jill 38:24

I love that. And do you offer in your clinic ozone, hyperbaric, and some of these other therapies?

Dr. Mel Schottenstein 38:27

We do. We do EBU. We have hard-shell chambers and IV therapy.

Dr. Jill 38:36

Amazing, you're just practicing what you learned as your unofficial education as a child, right? I'm amazed because I didn't know your story.

Any last bits of wisdom? It's funny because I saw my parents and a friend of our family was diagnosed with colon cancer that was metastatic—she's about my age—and they wanted just one thing that would help, and I thought: "Oh gosh, it's

not that simple." You and I know it's way more complex than that, but if we had to boil it down to "Where would someone start?" They've just been diagnosed with cancer. What kind of bits of advice would you give for the beginning of that journey?

Dr. Mel Schottenstein 39:12

The first is actually dental. I would actually tell them: "What's in your mouth?" Yes, figure that out. The second is, "What are you putting on your body and using day to day?" And the third, I would say, "What are you eating?" Those would be my top three.

Dr. Jill 39:32

Brilliant. Every one of those is not a \$20,000 session of 40 hyperbaric [therapy], which is great, right? But I love that, and I love talking to patients like, "Let's start with clean air, clean water, and clean food," because it starts really simply and everybody has access to that. You don't even need you or I to start with all these things. So that's awesome.

Do you have a biological dentist or someone you work with in town?

Dr. Mel Schottenstein 39:54

I do. There are a few biological dentists that are here in the city, and definitely there are people that for sure I refer to regularly. Yes.

Dr. Jill 40:06

I think every doctor should have a dentist right next door, right?

Dr. Mel Schottenstein 40:10

Absolutely. I'd love to have it in the same practice so I can just say: "Okay, go next door. You need to get it now."

Dr. Jill 40:20

The last question here [is]: Are there cases of cancer severity or maybe they totally fail conventional [treatment] where you would send them out of the country or to another location or clinic? Obviously, you do a ton, so I don't want to diminish your work. But are there sometimes those levels, like at Paracelsus? Do you ever send people out of the country for treatment?

Dr. Mel Schottenstein 40:36

I have, but I found that most people don't want to leave. I've found that too. But for those who can't leave, we don't turn anyone away in terms of the severity. Last year I had a person with a grade 4 glioblastoma who was given two weeks to live. She called me after one week after the diagnosis and said, "Mel, what can we do?" I said to her: "Obviously, I can't guarantee any outcomes. I really don't know. I don't have a crystal ball, but we'll do the best that we can. We'll remove your exposures. We'll start beefing up your cells, bumping up your immune system." As every month went by, she kept getting better and better. By month five, the tumor already decreased by 25%. She was contraindicated from every conventional therapy at that point.

Dr. Mel Schottenstein 41:38

People latch onto the diagnoses, the names that are associated with them, and the timeframes that are given with the diagnoses. But no doctor has a crystal ball. No doctor can give you a real timeframe or can tell you where you're going to be in the next five years. None of us can. Whatever the severity—whether the person's going to be sent out of the country or stay with either of us here in this country—we can do our best to make your cells and your life overall as optimal as possible and clear out the things that are resulting in the cancer presenting in the body to begin with.

Dr. Jill 42:23

I love that as an ending. Maybe a year or so ago, I interviewed Dr. Jeffrey Rediger, who wrote a book about spontaneous healing. He's a medical doctor. I just loved his work. It's very similar to what we're talking about because he was a lot about belief and what we believe. If someone tells us we have two weeks or two months or whatever, the patient would actually fulfill that because of their deep belief that the doctor knew best. And I love that we took that away, saying: "No, anything's possible." And there's a fine line.

Dr. Jill 42:49

But I am like you: I believe in miracles, I believe in spontaneous healing and I believe in the actual evidence for personalized precision functional/integrative medicine and the things that you do. So I'm sure you've seen a lot of people outlive what their doctor told them.

Dr. Mel Schottenstein 43:01

Yes, absolutely.

Dr. Jill 43:03

I love it. I love giving people hope.

First of all, is your clinic accepting new patients?

Dr. Mel Schottenstein 43:08

It is. We're located in Scottsdale, Arizona. The clinic is called Mitogenesis Regenerative Medicine. Our website is www.Mitogenesis.health. Our main number—which we're happy to talk with you—is 480-781-4800.

Dr. Jill 43:28

Thank you, Dr. Mel. I'll be sure—if you're listening in your car and you can't write this all down—that it'll be in the show notes. You can find it wherever you listen to the podcast. Dr. Mel, thank you so much. First of all, just your generosity of time and knowledge. And I'm so sorry that you had to suffer, but my goodness, it's just amazing to see how your path in life—that was part of the education. Although you probably didn't know it at five, it's amazing to see what you've taken and learned! And I love that little girl; I can just see her being like, "Well, why?" [laughter]

Dr. Mel Schottenstein 43:59

Yes.

Dr. Jill 44:00

I love it so much.

Thank you guys so much for tuning into another episode of *Resiliency Radio*. As always, you can find the transcripts and everything—the details, the show notes, links to the websites, and Dr. Mel's clinic—at my website, JillCarnahan.com. You can also find this episode anywhere you listen to podcasts, Spotify, iTunes, or YouTube. Please join and subscribe. We can continue to get great guests for you. And thank you again for tuning in today. There'll be a new episode out each week. Take care.