Introduction and Terry Wahls' MS Story

One of the most important aspects of healing our belief systems and the foods that we eat. In this next interview, I interviewed Doctor Terry Wallace, the author of the Wasp Protocol.

She is a clinical professor of medicine at the University of Iowa Carver College of Medicine in Iowa City, and she is an educator that teaches residents and students and have done clinical research and published over 60 peer review, scientific abstracts, posters and papers.

In addition to being a doctor, she has her own story and she has been a patient with chronic progressive diseases of multiple sclerosis. She was diagnosed with relapsing remitting multiple sclerosis in the year 2000, and around that time started working at the University and didn't find a whole lot of ways to deal with the Ms..

And ultimately, in 2007, she was basically wheelchair bound and bedridden. But now every time I see her on stage, she dances. I want her to talk about her transformation and what we can really learn from it.

Because the power to heal the brain can be limitless. As long as we have the right tools. Very promising. Introduce Doctor Terry Walls. What about the walls?

Welcome to the forum. Super happy to have you on. Well, thank you for having me. You know, it's been many years since I read the book The Walls Protocol.

And in fact, it's one of my very first views into lifestyle and brain and my story was I was suffering from many concussive injuries at the time due to sports and snowboarding and all sorts of other great stuff, and developed a lot of neurological issues on my own, which is why I created this brain health system in the first place.

And your book is actually the very first, resource I ever had, to understand my brain a whole lot more. So I think, now we're full circle and I'm talking to you, so I'm super happy.

And super grateful to have you on. Oh, thank you so much. Yeah. But let's introduce people to you. Can you just tell us about your story and the the things that you've been through?

So I'm going to do it in real time. You know, back, 20 years ago, walking with my wife Jackie, a half mile from home. My left leg goes weak. I dragging it a hobble home.

The next day, I see the neurologist who says, Terry, this could be bad or really, really bad. Now, night in bed next to Jackie. I'm thinking about what is really, really bad.

I mean, and I think about the 20 years of worsening electrical face paint, that I've been struggling with. And, I don't want to become disabled. So, actually, I'm praying for a fatal diagnosis.

I complete the workup. Three weeks later, I learned I have multiple sclerosis. I'm a doc. I see that I do my research, I see the very best physicians at the very best Ms.

center in the country. I take the newest drugs. Three years later, I hear tilt, recline, wheelchair. I take my position, I take turns, and I continue to decline.

My electrical face paints are relentlessly worse. My ten year old daughter hugs me as tears streamed down my face. I can no longer sit up in a regular chair.

I have a zero gravity chair with my knees higher than my nose. But I go back to read the basic science night after

night, and I began experimenting on myself based on what I learned.

I decide my second year would drive disability. I started taking supplements to support my mitochondria. The speed of my decline slows. I'm like so grateful that I discovered a study using electrical stimulation of muscles.

I ask a therapist, can I try that? He calls it e stem. He says it's for athletes. It's really painful. He doesn't know if it will help me because yes, he can grow bigger muscles, but my brain may not be able to talk to those no muscles.

I convince him to let me try. The test session hurts bad. Really, really bad. But when it's over, I feel great. And we add a stem to my physical therapy.

Discovering Mitochondria and the Wahls Protocol

I discover the Institute for Functional Medicine and I take their course under protection. I have a longer list of supplements, and then I have a bigger ha.

What if I redesigned my paleo diet that I've been following for five years already? What if I redesigned my paleo diet based on all the supplements I'm taking?

It's several more months of research. I start this new way of eating. December 26th, 2007. Now, at that time, I'm sure we get cannot sit up in a regular chair.

I have severe fatigue. I'm begin to have brain fog and my trigeminal neuralgia is relentlessly worse. However, after a month of this new way of eating and a couple of months of my Eastham.

My pain is less my. I'm definitely more clear. Two months into this, I can sit up at my desk. I can sit up at the supper table and I begin walking with my walking sticks.

And then in May, on Mother's Day, I tell my family I want to try riding my bike for the first time in six years. We have an emergency family meeting. My kids think I should not be doing this.

Jackie says, to my big 16 year old, six foot five son. You jog on the left side. I was 13, you jog in the right and she'll follow behind. I get on my bike, you know, and it wobbles, but I catch my balance and I bike around the block.

That big 16 year old boy, he's crying. My daughter's crying. Jackie's crying. I'm crying. And I still cry thinking about that moment. Because that was when I understood that the current understanding of secondary progressive multiple sclerosis is incomplete.

And who knew how much recovery might be possible? Then in October, Jackie signed me up for an 18.5 mile bike ride. And once again, when I cross the finish line, we're all crying.

My kids are crying. Jackie is crying. I'm crying. Yeah, in this fundamentally changes how I think about disease and health. It will change the way I practice medicine and it will change the focus of my research.

Amazing story. And the inspiration really carries on to, guys like myself who are also looking for things have been supposedly to the doctors and trying to find ways of approaching healing and understanding and also discovering the Institute functional medicine back in the day, and understanding that there's always something that we can do, because if we stop looking, then we can't have success.

And this constant search for, for for answers is definitely needed. And not losing hope is, is something that we really all should take into much higher consideration, especially since the last couple years during the pandemic.

So I thank you for that. Thank you for that story. Thank you. Now, let's talk about your book for a second. The walls protocol. This was written several years ago.

And there's components of the book that I just found to be very interesting. So this concept of mitochondria and, you know, will this tell us about this concept of mitochondria?

What was sort of your moment in focusing everything towards the mitochondria? Yeah. So, you know, I've had two relapses really in my entire journey. The, visual dimming, and, the episode of weakness, of my right hand.

Otherwise, it was a slow, relentless decline. And I start reading, again, basic science, looking for things that that I can try for myself. And I'm reading about Parkinson's.

Huntington's, als, Alzheimer's. And to me, mitochondrial function was the common theme. And I thought that likely mitochondrial dysfunction is what drives this ability in the setting of multiple sclerosis.

And so then I was like, okay, what can I do to support better functioning of my mitochondria? You know, again, that's more slogging through some basic science.

Going back and looking, my, chemistry textbooks. What are the nutrients? What are the, vitamins? They're cofactors. What are some of the building blocks that the mitochondria need?

You know, and eventually, you know, we all. I'm doing this, trying. You know, I'm beginning to have brain fog. So this is really, a chore, to slog through that.

And interesting, at that time, there really were not many scientists talking about mitochondrial dysfunction for, multiple sclerosis, either for relapsing remitting Ms.

or for progressive. And most that has since changed. There are more scientists saying, yeah, you know, altered bioenergetics is a factor for Ms.. It's probably the big driver for, the brain atrophy, the spinal cord atrophy, and the fixed disability.

That's occurring. You know, the cons of mitochondria is, it's nothing new, but one of the things that I learned, was from one of my best friends who's a veterinarian in a veterinary school.

Healing, animals, especially livestock here in Texas, is all about how we can drive, the mitochondria. In fact, the the basic science. And behind healing is mitochondrial health, within, large animals.

Yeah. So that makes a lot of sense. If we get down to what do the organelles need, whether it's, mitochondria, the ribosomes, the endoplasmic reticulum, the cell membranes.

If once I began to think like, what does what do I have to do for the microenvironment, for these cellular structures? And that that was, how I started making my first supplement.

Cocktails was okay, what do they need? Yeah. And just looking at these sort of bulk chemical pathways or the cofactors here's, you know, NAD volume B6, etc., etc.

and it's, an exciting to talk about this right now because I think there was a point in time where it was kind of seen as hocus pocus medicine. But I think right now, there's so much research being dedicated to this, and even new drug discoveries are being dedicated to this, as well.

Do you, do you think there this is sort of the time for us to look at new scientific discoveries in lifestyle medicine? Well, absolutely. You know, when we do our scientific, research, it's easiest to do it sort of molecule by molecule or individual molecular pathway, by individual molecular pathway.

And that's certainly how we can understand physiology, how we can understand, what gabbro what it might take to repair it.

Soil Health, Gardening, and the Microbiome

But, I remind my patients and my tribe that life is incredibly complicated. Deeply interconnected biochemical pathways. And while supplements can be very, very helpful, there's not ever going to be a single supplement that fixes everything.

And you can't supplement your way out of a terrible. Yeah. It's so true. On another part of the talk, on the summit, I was talking to, Jennifer Maynard from research group on jeopardy.

And this reminds me of this. And she brings up this concept of the hollow biome. And the hollow biome is, not just our gut microbiome or gut bacteria, but it's what's on our skins, what's in the soil.

It's what's in the roots systems of these vegetables, and they all talk to each other. And some of the most nutrient dense, produce that we can grow have little nose, little nodules on there.

So root systems called nitrogen nodes. And these nodes have a huge bulk chemical, reaction that allows the plants to thrive and survive. And we consume that plant as the whole plant.

It has a very profound, effect on our system that we don't know very much about, at this point. And so, but this is why I'm very passionate about, you know, people eating, like, the whole Foods because they can.

Supplements are really taking away the biodiversity of the whole biome of the soil. Of the plant. And this reminds me of those browsing Instagram earlier and the foods that you eat, on there and what you grow.

And it kind of reminds me is that we really have to be, one with nature. We really have to, like, connect to the actual, elements of whole foods and soil.

What has growing your own food, allow you to really understand about your health? You think so? I'm a farmer's daughter. My, parents and I grew up on a farm.

And one of the things that, we we took the manure from our animals and put that on the soil. That really increases the fertility, of the pastures, of the hay fields of the corn fields.

And so we valued poop a whole lot growing up. It was, gold for the fertility. And I'm sure my parents and all my farming ancestors loved the fact that I talk about the microbiome, that I value poop now, and that I bought, value soil health in my garden.

Yeah. I care a whole lot about the microbial diversity of that soil. Now, I'm not putting poop on my soil. Sorry, folks, but I am taking the compost, from our, meal scraps.

And from the lawn clippings and the leaves, and we make compost. I put that in the soil, every year. And so we have incredibly rich soil when, garden.

I use our grass clippings as mulch. So, we don't use any, we tillers, on our garden. I don't use any, fertilizers other than, compost. Yeah, we have, you know, amazingly, fertile soil.

We plant, cherries, peaches, plums, pears, apple trees. We also have blueberries, ammonia bushes. I'm very excited. I planted thornless, black raspberries, thornless blackberries, this fall.

So it'll probably, you know, 18 months or so before we'll be picking those berries. But we're we're really looking forward to that. It's. You got to take care of the soil if you want to have really good garden produce, if you want to have a healthy body yourself, you have to take care of your, microbiome, as well.

And that's where, plant diversity, diet diversity, will, will really have a huge impact on maintaining the health of my microbiome. You know, I care a lot about the microbiome of my soil so I can have a healthy garden.

All right. Part of is also, you know, you're the ones that are out there harvesting, curating the soil, and the the direct

connection and the grounding.

I mean, that's got to be something special as well, right? Oh, man. I, I love gardening, you know, and I don't garden with gloves. I want to have my hands in the dirt.

I want to be directly in the soil grounding. A my family will see me pulling out my carrots and my radishes, and I just wipe them off, on my sleeve, and then I'll eat them if I have a little bit of grit, you know, that's fine.

Because I want to have that rich microbial diversity, food. Let's go into, this next part, which, you know, I always values, which is mindfulness. I think it's a great transition to talk about that.

How important is our belief systems and relationships and mindfulness in healing the brain? You know, if we're going to be working on improving, my diet and my self-care, it's probably means I'm going to add some new habits and extinguish some old habits that are not serving me well, that takes effort.

And in order to be willing to do that effort, I have to be motivated. So, this is where your mindset and your mindfulness, will be really huge. In my case, you know, I knew that I couldn't recover.

I had a progressive disease, and things were just going to get steadily worse. So I was doing all that I could to slow my decline, because the few steps I could take and the fact I could still use my hands was huge.

And what kept me going was I had young children, and I knew they were watching me and they were watching what I was going to do. And I could either give up and give in to the to the despair.

And I certainly had plenty of despair going on. And, in my heart. Or I could like, well, I can model resilience and that life is difficult. Terrible things happen and you do the best you can anyway.

And so that that, you know, that was my little mantra is like, your kids are watching. They're going to do what you're going to do. You can't give up.

And one of the things that we do, and in my practice here in Texas, is that we look at brain frequency patterns on, quantitative EEG analysis and, one of the most important aspects about, brain health, especially in Ms., in parkinsonism, is that, the people who, tend to not improve as much have specific dominant frequencies that we can see on the brain mapping, and we call it the hypervigilant frequency.

So in neurology we have this pathway called the go slash no go pathway.

Mindset, Community, and Healing Support

And that dictates the autonomic function of the fight or flight versus the rest and digest. Right. And so and so in most of the brain disorders there's even though people's diet is the best that they can do.

Right, even though that, they're doing everything that they can with terms of hydration and supplements. But whenever we see sort of these, these dominant, hypervigilant frequencies, it's always the sleep that's disrupted, relationship issues, support structures, and actually inhibits healing quite a bit.

And still is not until we really, focused using like, mind body medicine techniques and stuff like that that we're seeing like these massive transformational changes in the mitochondria.

Right. And so I think that healing element in, in the mindfulness and especially what we see in EEG patterns and bring electrical patterns of the brain really curates, a way of, of, of, healing.

And this is why I think that people within the community, right, the community based healing and support structures are always really, important. And and you have a name for your community, is that correct?

Yes. We call them, walls Warriors as warriors. And there is a certainly a big tribe out there. I would say my, work has touched the lives of millions.

And we have hundreds of thousands of followers that, you know, are embracing this as a way of living, a way of being in a way of creating hope and possible.

Yeah. And how beautiful is that? Is, you know, we have we focus so much on the microbiome and, and, the soil diversities, but we have organisms, other humans that are around us that are just as important as well.

And I think that's a fantastic thing to to have on any healing journey. Speaking of tribes, let's talk about, your recruitment for, the clinical trial that, yeah.

So one of the things that, I've been doing all along, our clinical trials testing the effectiveness and efficacy of the things that were so critical for my healing.

We have a new study, very exciting advocacy of diet and quality of life, comparing, the walls elimination diet, a key to junk diet, to usual diet and the usual diet group.

We're giving a monthly, email and text with, cooking videos and tips on how to reduce your added sugars. Eat more vegetables, the two intervention diets to meet with the dietitian, to get trained on the intervention diet.

And have access to group support calls. People will come in, with relapsing remitting Ms., age 18 to 70. There is a, examination in Iowa City at time zero, another visit, month three and another visit at month 24.

People get an MRI without contrast so we can see what's happened to your brain. Do you have enhancing lesions or not? And then most importantly is the brain volume loss, which occurs with healthy aging and is, much more rapid if you have Ms., are we able to get people back to the rates of brain volume loss that you see with healthy aging?

I think we can, and I think the, intervention groups will be able to do that. And I think it's quite possible the control group will as well, because we know that people who agreed to be in a dietary intervention study, even the control groups, we say just follow your usual diet.

They they're always eating a diet that is much better than the standard American diet because they, they they came to the States, they said, look, I'm ready to improve my diet.

So even the control group, will eat a better diet. So it's quite possible that all three groups, are going to improve. That's quite possible that even the control group will get back to, a rate of healthy aging.

Now we are doing a diet assessment. Month 013, periodically throughout the study. And again at the end so we can see did people follow the intervention diet.

And in the usual diet group are they find the standard American diet or did they, in fact, improve their diet because, we anticipate that the control group will also improve their diet, at least somewhat.

That's amazing. So for those people. Yeah. So so the, so are you in recruitment phase right now for. Yeah, we're recruiting right now. We'll recruit through all of 23.

So, we're very excited. We will have 156 people in the study. It will be one of the largest, longest studies dietary intervention studies that have been done in the setting of Ms..

We are thrilled. And we will still have slots for about 100 people. We've got 50 people already in the study. And we'd love to have your followers help us.

So our, study. Great. And how do people, learn more information about it or apply for it? Well, I'll get you the links

for that. You know, what people do is they'll complete a short survey.

You'll confirm, that you're eligible, you're interested. We will get information from you. So you can reach out to your neurologist, who will give me the medical records that I can confirm, that you've been diagnosed with, again, relapsing remitting Ms..

And then we'll begin the process. Explain, the study, procedures confirm that you're interested, get informed consent and begin the processes again. I'll get you the links for that.

If you Google walls, you Iowa research, that'll take you to our study page. And that will, you'll see our city brochure. You can complete that screening survey.

Definitely send that out. Now, the people don't have to be in the study to benefit from, the, the walls, diet as well. So, it's very well laid out in the book and, and let's, let's talk about the diets going backwards a little bit.

And this concept of organ meats. Oh, yeah. You know, where did that come from? Yeah. And, and how is that benefiting the brain? Yeah, yeah. You know, we have been, you know, for millions of years, humans evolved from primates, were eating mostly plants, gradually start eating more and more, animal products.

Diet, Organ Meats, and Seafood Nutrients

And when we were first, homo sapiens were eating, a lot more mussels, clams, oysters. We were, breaking the long bones, from the, animals that were killed by the hyenas.

And the wild cats were having lots of marrow. We were also using rocks to, break open the skulls, eating those brains, and eating eyeballs, because, the, in those parts of the body were really, great sources of coenzyme Q.

Great sources of fat, great sources of, omega three fats. And that let us grow our big brains. Yeah. Our ancestors, who were effective at running down game over a, 12, 24 hours.

36 hours. And, the wild game in, Central Africa. We just keel over from heat exhaustion because they couldn't sweat as effectively as we could. And we learned that the most useful parts of the animal were the the heart, the liver and the organ.

Meats. And you might eat, muscle meat. Or you would leave, muscle meat, for the other scavenge scavenging animals over time, we lost some of that culinary tradition, and we're now into muscle meat.

And people don't, value, the organs. Nearly, as much. However prepared properly. You know, liver is delicious. Heart is delicious. Kidney, can be really, quite delicious.

But they have to learn how to, prepared properly. And, the organ meats, great sources of coenzyme Q, great source of B vitamins. Very good source of creatine. Carnitine?

A good source of easily absorbed, zinc. Magnesium, easily absorbed minerals, easily absorbed B vitamins. Retinol. They will not have a lot of vitamin C, and if you cook meat you destroy the vitamin C that is there.

So it's a reason why, eating plants and sauerkraut and having some of your plants raw can help make sure that you have sufficient vitamin C things. And so, this kind of reminds me of my culture.

So I was born in China, and, multiple generations of doctors, and family. So, my grandpa, well, my whole family, actually, in China, my father's side, any time that there's any ailments.

So we would cook, like Chinese medicine herbs. Right. So we'd boil that down and then add specific things to the, the mixture. For example, spleen is a really, really common one, right.

The thymus, right. Of, of sheep and stuff like that. And then brain and, and and heart and stuff like that, that's all kind of it kind of marries well together with sort of the Chinese hog.

Right. And then, as a kid, I was like, hey, I'm sick. Like, here's, here's some spleen and then this and that. With the actual herb together that's boiled like, like a broth.

So there wasn't necessarily a difference in my mind of growing up between, like, medicine and food because, you know, sort of my culture in rural China, that was sort of, Yeah. The thing that we did.

And then I moved to the US, I really missed organ meats in the U. S. for, for many years before they came available again. But now we're seeing a different trend, which is which I think is, really good.

But I agree with you on the preparation. My favorite one, by the way, is, is this kidney? It's my favorite texture, if you will. It's, you know, it's very, very delicious.

Liver is my family's, favorite meal. There's many wonderful ways to prepare a liver. Of course, but if you overcook it, it becomes, dry, tough, sort of like, cardboard.

It's really terrible. But if you leave it medium rare, it is, so delicious. Yeah. So even 30s is, overcooking the liver makes a big change between two huge changes.

Massive. Yeah. No. That's great. So we know that the the organ meats have a fantastic sources of nutrients. And of course, we have to get some from plants as well, like vitamin C and stuff like that.

But what about, seafood? You kind of mentioned shellfish. Oh, yeah. Yeah, yeah. Talk about the seafood. So I want to point out that life began on the sea.

So, and, you know, over billions of years, we eventually become multicellular. And eventually we get onto to the land. And for all of us who you're hearing, I we're far from the sea.

Yeah, we are at risk of having insufficient intake. A lot of the trace minerals that are plentiful in the sea. If you have a little bit of seaweed a couple times a month, that will help ensure that you're getting those trace minerals.

No, it's it that can be. You have to have a little, care with that, because IRA, in some ways trace minerals. If you're too low, that's a problem. If you're too high, that can become a problem as well.

You know, so I ask people to begin using seaweed, a little bit like a, like a spice. You know, once a month, then twice a month, then maybe three times a month.

Keep an eye on your thyroid and your health status. If you are low in iodine, because my body will use iodine to kill microbes. If I have a chronic infection, such as EBV or an Lyme or climate, or long, any long, indolent viral bacterial infection have me a little higher dose of iodine in my body will make it easier for me to, maintain control over that infecting organism.

Using. And, and the last topic is sleep. Like, how important is sleep to, the regenerative process when it comes to the brain? You know, the older I get, the more I've understood how vital sleep is.

When I was really young, I had a lot to do. I was very ambitious. I thought it was fine. That I only seem to need four hours of sleep at night. And I had my kids, and then, you know, then I really didn't get much sleep, and I thought that was fine.

I'm sure those years of sleep deprivation accelerated my decline. And what I finally, understood that sleep is vital to my health, and I prioritize getting sleep.

That, my health journey began to improve. I tell my patients that the goal is 7 to 9 hours, that when you're sleep

well, when you're sleeping. So when your body does a lot of really important biochemical stuff like make hormones, detoxify, clear your brain, from toxins, consolidate your memories.

Yeah. And without sleep, you can't do those things. And your health would ensure. I'm very excited. I slept 9.5 hours last night, and man, do I feel great today.

It's amazing. I wish I slept nine hours last night, but I was close. It's not bad, so.

Sleep, Resources, and Closing Remarks

Okay, great. Well, as we, as we kind of closes off, I do want to share some resources with our listeners. So these people go to, Terry walls.com/diet.

So try WHL s.com/diet. There's actually a downloadable diet in the cheat sheet, to figure out like which which therapeutic diet is really right for you.

And, it's very evidence based. And, it's, it's something that's nice and really concise to, to talking to. And the other thing is, the research. So, what I just kind of googled is University of Iowa, interior walls research, and I found the website.

So, people can Google that, as well. And then also you also have an app, don't you, for that. Yeah, we have, we, we've created, an app, the Walls protocol mobile app.

And this is a really great tool because it helps you be more successful with habit creation. There's 112 different habits, actions that that we help you, begin.

You'll get it on your phone. You can prioritize. What are the things you want to track? What are your goals? And slowly begin picking off what is the next achievable, task?

Again, we have thousands of folks using this. We'd love to help you, adopt the walls protocol. It's a great tool. Amazing. And then you also have an event coming up in 2023, right?

We have the M. S. and Neuro Mewn summit. Our goal is to have over 100,000 people on this. We'll be interviewing all sorts of experts, including yourself, talking about what are the environmental factors that worsen multiple sclerosis and other neuro immune problems affecting the brain, spinal cord and peripheral nerves?

And what are the things that we can do to help calm the disease activity, stop the decline, and begin to restore function? And, that'll be running from July 5th through July 15th is, we're looking really looking forward to that as well.

Well thank you. I really want to thank you for being on and sharing your story and the journey, but also offering so many tools and hope to the people with either brain health issues or they have family members with brain health issues, and they're listening in right now, I'm sure.

And, you know, it's it's one thing to be diagnosed with something and then, being on medicines and not feeling good about it. It's another one to really take health into your own hands.

So I want to appreciate you for being part of my journey, even though you didn't know it many, many years ago. And I want to, get people to understand that what we're trying to provide is not just hope, but there's there's actually systems for brain improvement.

So I want to thank you for that. Thank you.