Introduction and Dr. Wahlsu2019 Background

Welcome back. We're continuing our conversation on Reversing Crohn's and Colitis. And today I am joined by my wonderful colleague Dr. Terry Wahls. And if you're not familiar with her work, please be prepared.

You're in for a treat. Not only is Dr. Wahls a pioneer in this space because of her own journey with Multiple Sclerosis, which I will let her share with you, but also in the way that she has brought diet and lifestyle choices to the forefront across paradigms of medicine.

So she's an Institute for Functional Medicine certified practitioner, and she also conducts clinical research using functional medicine principles in the setting of Multiple Sclerosis.

In 2018, she was awarded the Institute for AI for the IFM Linus Pauling Award for her contributions in research, clinical care and patient advocacy. Dr. Wahls has secondary progressive Multiple Sclerosis, which confined her to a wheelchair for four years.

She restored her health using a diet and lifestyle program she designed specifically for her brain, and now peddles her bike to work each day, which is just phenomenal, isn't it?

She's the author of The Wahls Protocol: How I Beat Progressive MS Using Paleo Principles and Functional Medicine. The Wahls Protocol: A Radical New Way to Treat All Chronic Autoimmune Conditions Using Paleo Principles.

And the cookbook The Wahls Protocol Cooking for Life: The Revolutionary Modern Paleo Plan to Treat All Chronic Autoimmune Conditions. So she is quite, the expert.

And we're in for a treat today. thank you so much for joining us, Dr. Terry. Thank you for having me. Yeah. Why don't we start with your story? Because I think this really provides help to actually really working through a chronic condition.

So I have, so I'm an internal medicine physician. I'm in practice doing really well. in 20 years ago, actually almost 25. I have far from home. My left leg was weak, you know, dragging. And I have a home.

When I see the neurologist says, Terry, this could be bad or really, really bad. And so for the next three weeks, I go through, lots of tests. I hear multiple sclerosis. I do my research.

I find the best MS center in the country. I see the best physician. I take the newest drugs. Three years later, I hear tilt, recline, wheelchair. Because I've been getting relentlessly worse.

I take my research on. For me, chemotherapy does not help. I take TYSABRI, the newest biologic does not help. I'm switch to cell support. And then I ask myself a really important question.

Am I doing all that I can? And that's when I go back to reading The Basic Science, which, by the way, is a real chore because I'm not a PhD. I'm not a neurologist.

but I just, developed the theory that mitochondrial dysfunction is what drives this ability. And I create a supplement cocktail for my mitochondria. And the speed of my decline slows.

I'm super grateful. I discover a study using electrical stimulation of muscles in people who are paralyzed, who are never going to walk. And I, meet with my physical therapist.

he agrees to give me a test session. it hurts a lot, but when it's over, I feel great. So we add the electrical stimulation, of muscles to my little itty bitty, tiny workouts that I was doing every day.

MS Diagnosis and Recovery Journey

and then I discovered the Institute for Functional Medicine. They have a course on neuro protection. talk a lot about mitochondria. I have a longer list of supplements.

which I'm happy to add. And then I had this really big. What if I redesigned the paleo diet that I've already been following for five years? Based on this long list of supplements that are important to my mitochondria.

So that's more research to figure out where they are in the food supply. And I have this newly designed and very structured paleo diet. Now the December of 2007 I've been so weak, I cannot sit up in a regular chair a been in a zero gravity chair with my knees higher than my nose.

That's how I stiff the Rosin Clinic. That's how I take my meals at home. I can take just a couple steps using two walking sticks and begin to have brain fog.

I have tried general neuralgia. This really a lot worse. It's very clear to me I'm on track to become bedridden by mental illness, probably demented by mental illness, probably died with intractable horrific electoral face pain.

And that's when I start this new way of eating. in. By the end of January, it's clear that my mental clarity is improving. My energy is improving. My physical therapist says, you, Terry, you're getting stronger.

He advances my exercises. I'm doing ten minutes now. Twice a day. And I tell my family I'd like to try sitting up in a regular chair for supper. First time in two years.

And that goes pretty well. And then, in another couple months, I am walking with two walking sticks at the hospital, stunning my colleagues. And then with one walking stick and then without any walking sticks.

And then in May, May that same year. So 2008, I tell my family I really want to try riding my bike. It's the first time in six years we have an emergency family meeting.

Jackie tells my son, who's six foot five, Zach, you run along side on the left. And she tells my 13 year old daughter said, you run alongside in the right and she'll follow.

And we get in position. I get on my bike and I bike around the block. And now that big 16 year old boy, he's crying, Zebby my 13 year old, she's crying.

Jackie's crying. And if I relive that moment, tears can still come to my eyes. Because when you have a progressive neurologic disorder, one of the things you learn to do is you let go of the future.

Because the future is so grim, you just agree to take each year unfolded. So even though I was remarkably better, I was still just taking each day as unfolded.

I didn't know what it meant, but that day, I knew that the current understanding of secondary progressive multiple sclerosis was incomplete. And who knew how much recovery might be possible?

So I kept biking a little bit more every day. And then in October, Jackie had signed me up for the courage ride 18.5 miles, and I finished it. I crossed that finish line once again, raw, crying.

You know, 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 the research that I do.

And I've made it my mission to teach the public that, yes, there's stuff that you can do and teach clinicians, that yes,

there are things that we can do to change, the the healing journey of our patients and to do the research that will change the standard of care.

So I am thrilled to be here, chatting with you and your tribe that. Yes, despite whatever your physicians tell you, there is so much that you can do that will change your healing trajectory.

Thank you so much for saying that. Right here at the top, because I really view each of these interviews as a love letter to, you know, really who you and I used to be struggling with our health, searching for answers.

And the last thing that I want is for people to take that first or second opinion from a doctor that doesn't know any better. It means, well, but doesn't know that they're limiting your future by, you know, making these big, grand statements.

So, you know, and I think it's fine to see the conventional specialist who is going to talk with you about the FDA approved drugs, which may be very helpful to, but they don't have training on lifestyle medicine.

They don't have training on the impact of diet, on addressing sleep, on addressing, toxic exposures, and all these resilience factors that we are, building the research showing what a huge impact they have in the MS and neuroimmune space.

And clinically, it's certainly, these same interventions are very powerful in the inflammatory bowel disease space as well. I totally agree. So I know that you wanted to cover with me today the forums.

Yeah. Yeah yeah. Micro glia micro environment and micro nutrients. What are these and why are they so. Okay. So the mitochondria are the little power plants of the cell.

They're ancient bacteria that were engulfed. you know actually about 3 billion years ago, by bigger bacteria, in, allow us to generate energy more efficiently for the cell.

And that energy is what the cell uses to drive the chemistry of life. Mitochondria. and then, micro glia, all of us, as we age, our brains have a little more inflammation that becomes a problem and a little more degeneration that becomes a problem.

So even if you don't have an autoimmune disease, the microglia are going to get stressed and not perform very well as as part of aging. If you have an autoimmune disease, whether it's multiple sclerosis or a, auto immune disease involving your gut, you also have like a glitch that are not working very well in your brain.

Increase the probability of symptoms that you can tell me, are these common in your population? Fatigue, anxiety, depression? Brain fog. I see you nodding.

So in my experience, those are very common problems for people with autoimmune disease involving their gut. And that means your microglia are activated, in not doing very well.

And then we have, so we want to calm the microglia. And this is about the microenvironment. We we have billions of dollars being spent to try and find drugs that will fix up your microglia.

It's going to be a waste. We'll find drugs that work really well in mice, work really well in rats. But when they try to use those drugs in people, because people will get what we want, we get to have fights with, our family members.

We get to ruin our sleep. Exercise or not, smoke or not, live in an environment that has too much, low air quality. and so we have all these environmental factors that will prevent the drugs that would have worked well in the mouse.

Mouse studies? they won't work very well, for human studies. so this is where the microenvironment, is so important. And remind me, I have code three M's. What?

Which m did I miss so far? You can do tweets. Okay, so for you to repair the myelin, and repair the gut, for that matter, you have to have the building blocks.

If we are plants, we can make do with, you know, minerals from the soil and oxygen from the air.

Mitochondria, Microglia, and the Microenvironment

and, we can photosynthesize and make our structures because we're not because we're animals. We have to eat our food. So we have to be able eat our foods, digested and then assimilated into our bloodstream and use those building blocks to make the stuff that we need.

And then we need the cofactor, the Bowman's, the minerals, to facilitate those chemical reactions. And we now know and we didn't learn any of this stuff in medical school, anything about nutrition, sadly enough.

Nor do we learn anything about, the microbiome, because we now know that we need the microbiome to help us digest our food and assimilate our food and make, those proper nutrients, because the microbiome is talking to our immune cells.

And also, by the way, talking to my brain, in your brain. Yeah, that's that's beautiful. Sure. Yes. Yeah. But how can this how can somebody take this information who's struggling with these chronic conditions and take their life and their future into their own hands once more?

You know, one of the, things that my veteran patients taught me, at the VA, is that, it is work to begin to change our habits, our self-care routines.

and that does take some effort. And biologically, we we like to, avoid effort. we we tend to be sedentary. we we conserve our energy that served our species very well for millions of years.

So if I'm going to do the work of creating new habits, I have to have a reason why. and so you might wonder, what is your reason for doing the work? Why would you put in the effort?

And so, a question that I like to ask is if you if your home was beginning to have smoke rolling out of the windows so you don't have flames shooting out, but we have smoke shooting out.

is there someone or something that you love so much you would run in to save, even barefoot over broken glass without thinking? And usually what I hear is my grandchildren.

My children. It might be my spouse. It might be a parent. it might be the cat or the dog. It might be, their their life's work. some very precious, family artifacts.

If there's nothing, then I'm going to suggest to that person, let me send you to talk therapy, because I want you to find more meaning in your life. but if there if we can find something or someone that they cares that deeply about, then my next question is, what if your health could improve a little bit?

What would you like to be doing with that person, or your dog, or your cat that you can't do now? I don't ask for dramatic improvements. We just need a little improvement.

Now I've got a reason to do the work. we have to find a reason to do the work. Because if we don't have a reason to do the work, we will avoid pain, discomfort, and we will seek pleasure.

That that's what your brain is wired to do, and that's what your patients will do. And that's what everyone who's listening here, you're going to do. If you have a reason to do the work, you will do extraordinarily difficult things for the people we love.

Oh, I'll run into a burning building for the people I love, no question about that. I love that you're sharing this

because, what I say when people are still in that, you know, students and clients in our practice, the things when they're still in the bargaining phase, it's like, well, how much of this do I actually have to do?

I say discipline is remembering what you want. Yeah. You know, and I will acknowledge that, we have to have self-determination. So I invite people, you know, pick your start date, pick the size of the intervention that you that you want to start with, because I want you to be successful.

If what you need is a small first step, that's fine. And for some folks are like, your food's too hard, but I could really work on, exercise. Like, okay, start there.

sometimes it is. Food is too hard. Like, okay, could you work on the ads instead of the subtractions? And so, like, that's fine. Let's, let's work in the ads.

And what are the things that you're going to add to your diet. And here are the, the things that, that we suggest. And you can just begin step by step.

And I acknowledge that if for you, a mediterranean diet is what you can do as a family, great. That is way better than the standard American diet. Do that. That's perfectly fine.

Now, if you want the diet that has the best research with the largest effect size, then that's the modified Paleolithic diet. That's about twice as effective as the other diets.

But if it's not what you and your family can do, but you could do the Mediterranean diet, do the Mediterranean diet, do what you could be successful with, and then you're you're doing that, you're feeling better and you feel like, you know, I would if I could feel even better yet I can come back for like, well, so we could work on the diet a little bit more, or we could add in sleep, we could add in, stress management.

We could add in toxin, remediation. and so if you let the, individual decide which domain, which, lifestyle, area they want to work at, and the size of the intervention.

then they'll be successful.

Motivation, Autonomy, and Behavior Change

If I'm the one who says you got to start with diet, and you have to start with this particular diet, now they're going to fire me, or this should, because I've, disrespected their autonomy.

I'm really glad you're making this point because we, I think we often outsource our personal responsibility for our health to our practitioners. And we, we think that's actually the best path forward.

But in truth, our, our practitioners must be our guides and that's it. We still have to be the ones that are doing the work. So I have. To own your decision.

and I invite people to think of this as being the principal investigator of the most important experiment that ever existed, which is their life. So you have a hypothesis, an idea you're going to test with whatever little next step intervention you're going to take.

And it will either be a resounding success. Like, yeah, I really do feel better. Or you know what? Actually I feel worse or it had no impact. Then you'll learn and you'll make your next, intervention.

And if you do that, you will continue to refine your self-care routine. And I predict over time you'll keep getting a more, precisely developed, intervention plan for yourself and for your family of that.

So you said something that's really interesting because I can just hear people in the audience going, okay, the doctor was, I've done paleo. In fact, I've tried every protocol for my autoimmune gut condition.

you know, I've tried every diet, every cleanse. What is modified paleo mean to you and why has this been so successful? Yeah. So, I want to remind everyone I'm diagnosed in 2000.

I hit adapt the paleo diet in 2002, give up all grains, all legumes, all dairy. I continue to go downhill, add supplements. Starting in 2004. I have a very robust supplement regimen.

and then, in 2007, I'm like, what should I be stressing to get my nutrients from food as opposed to supplements? I still, I still take a lot of supplements and I still do.

And then I structured my paleo diet. I also did food sensitivity testing, and I saw that I was sensitive to eggs, so I took out eggs. I added and I structured my paleo diet, and so we were stressing vegetables in the green leafy category.

so kale, spinach, Swiss chard, other greens, the green herbs, in the sulfur rich category, cabbage, onion, mushroom family and the deeply colored, beets, carrots, berries.

and then for and I prefer that people eat meat, meat, fish, poultry. But I recognize some people are spiritually opposed. Uncomfortable. so we do have vegetarian vegan options, for those individuals, and that's, basically, my level one, when you're ready to go to the next level, I want you to add in liver once a week for obviously.

Good for you. seaweed, nutritional yeast, algae, and, fermented vegetables. And if you're going to have nuts and seeds, I'd like you to soak them and sprout them.

And then we have ketogenic versions, and we have, an alert formation diet that takes out, the legumes, even the gluten free grains, and, takes out, nitrates.

And I should make clear, even at the level one, I'm taking out gluten containing grains, dairy, and eggs. So one of the things that I see people get tripped up on is they get very, fixated on certain foods in the, their diet become smaller and smaller and smaller.

You know. That they're actually still maintaining just they're few ingredients are actually highly inflammatory in some regard. And so people would say, let me come back when I was using this in my clinical practice, I was at I was sitting there, we had no functional medicine testing.

So we used a lot of the elimination diet and then would reintroduce foods back in to get people to the less restrictive diet. If you've adopted, the paleo diet, you're still getting doing poorly, you've adopted elimination diet and you're still doing poorly.

Then, what I, what I would do is we need to investigate further. so I do a food sensitivity testing. I do, toxin testing, and, I may look for mold. I may look at, other viral, indicators.

I'll look at, hormone balance because likely it's multifactorial. And it's I do have some people have remarkable transformations reading my book. It's, and every week we still are getting emails from people from all over the globe who've had their lives, transformed, by reading my book.

But if you adopted the paleo diet, you're still struggling. You might need to see a functional medicine trained practitioner who can investigate and really personalize the recommendations for you.

Yeah, I agree, I think that's beautifully said it. You know, so many gut conditions are multifactorial. And that's food is just one piece. Although it is crucial, you know, I also want to get a chance to talk to our colleagues today about this because I know you've had a range of responses and.

You know. It's groundbreaking information. And I want to give you a chance to meet best and speak to practitioners who are on the hunt to update their tools for the future.

Well, the first one is that, patients are looking for people who are trained in lifestyle medicine. they want to have, somebody who has expertise in nutrition, sleep, stress management, exercise.

and then but behavior change is really hard. Behaviors don't change just by giving them information. It doesn't happen occasionally it will. we know from the how when a physician says start this diet, whether it's a mediterranean diet or American heart, diabetic diet, low fat diet, whatever, whatever diet the physician recommends, only 25% of patients will adopt it.

That's not very many will make any attempt. And then if you look at how many of those 25% are still doing that diet, two years later, it's less than 10%.

So that's 2.5%. Information alone is not enough. and there are a lot of strategies to help with that. we've created, the walls behavior change model that teaches clinicians, how we've been able to achieve 95% success rate.

I've only measured that at a year, so I don't know what I am at, two years, but I'm sure it's much higher than 2.5%. Right. I'm I'm sure it's much, much higher.

And, you know, it's similar statistics for exercise less than 25%. Even when their physician says we need to have you be an exercise program, less than 25% will implement that.

And two years less than 10% will so be sustaining that. So it's 2.5% information is not enough. It is certainly very helpful for the trained physician to say, please do these things.

but then we need to support them. health coaching can be helpful. and then, you know, the walls, behavior change process of, helping people, you know, identify in the first step is an inspiration.

You have to have inspiring story.

Modified Paleo Protocol and Personalization

in other cases, you have to have, the ability to teach in metaphors so people can understand, the possibility of why this intervention might work. And so we have, you know, basketball metaphors, coaching metaphors, teaching metaphors, mechanical metaphors, farming metaphors.

So we have, a bunch of metaphors that we, talk about so people can, can relate to, like, okay, I think I can see how this might work. And then we get into, more the process of how to address facilitators and barriers, and, all the while recognizing people have to have autonomy.

The person has to be willing has to be able to choose, like, yep, I'm ready to do this or, it's too much work. I can't do this right now because my spouse is going through cancer and I, I can't take another thing on, and so we acknowledge that it's hard.

This might not be the right time, but it may be the right time. And so we'll go ahead, and we'll work with you or invite you to come back when you're when it is the right time.

Yeah. I really appreciate you saying that. And we don't even know this, but I teach metaphor mapping work and metaphors are the I mean, fundamentally the easiest way to access the subconscious and open up a psychoactive experience.

So I just love that you're incorporating that. I didn't know that you did that. It's it's very, very helpful. people have to be able to see how this could be working.

and, we have to speak in ordinary language. It can't be, you know, MD, technical speak, speak. I have to, not one of the things that professor Bill been, taught me in medical school when I was a youngster, many, many years ago, at the end of every clinical encounter, I would say, be sure to ask your patient, what did they learn and what they're

going to do.

And what I learned was, I got to learn. I got to speak plainer because people like that, I have no idea what you just said, like, okay. Okay, I got to speak plainer.

And then the other thing that, I learned was, hell, no, doc, I'm not doing that shit. Yeah. I was like, I'm so glad you told me. So let's let's negotiate what you think would be realistic.

And sometimes I'd say, you know what? This we just can't come to, anything that's going to work. And I think I'm not the right physician for you. And so sometimes I would tell them, like, we have to get you, someone else.

Yeah, but by asking people what they learn, what they're going to do and invite them, like, it's okay to tell me you can't do it. And then I began to say, it's okay to tell me you can't do this.

Then people say, yeah, you're right. I can't like, okay, so. can we brainstorm? Is there something you could do? And that's when I learned, like a small next step that they could achieve.

Walk out there to spastic. They would achieve that and actually do quite a bit more. But by the time they came back. Yes. Yes, absolutely. Small wins build a lot of momentum.

I love that. Yeah. You have to, have them identify, you know, can they do the next step, or do you need something smaller? And so, yeah, I can do it. Well, no, I did something smaller, like a whole lot smaller, like.

Okay, so let's brainstorm for a moment and then they leave with a next step that they are enthusiastic about. And then if you have the resources to have somebody in your team check in with that person and you and you could find out like would you like, like us to check in with you in two weeks, four weeks a week.

that goes a long way towards reinforcing success. Absolutely. We totally agree. My practitioners know every session has to equal momentum. You know, and I and I should we remind everyone I want to go back to, the walls protocol the wall style.

If you have a gut issue. This is about soups and stews and bone broth, and you're not having nine cups of raw vegetables by any means. you're not having any raw stuff.

You're probably having meat broths, in soups and stews. and eventually you might be able to have some fruit, and eventually you might be able to have, some raw vegetables or maybe never your gut will tell you, but it's really important.

gluten free, dairy free, probably egg free will be very helpful. Your protein sources, soups and stews and listen to your gut. Absolutely does. This is a really good, practical, actionable tips for both the patient and the doctor.

What else would you say for somebody who's like, freshly motivated? Okay, Doctor Wahls, I'm going to I feel like I've tried a lot of things, but I'm going to tackle this.

You know, I'm going to make space in my life. Where should they start? You know, according to the walls protocol. Well, actually, the very first thing is to figure out your why.

Yeah, that is absolutely. The very first task I want you to do is, some deep work on if my health could improve a little bit, what I'd like to be doing.

and is there a person that, you have in mind? one of the things that I, my veterans taught me, and that is a very useful tool, is to think about the hero's journey, because the hero's facing, you know, and society's facing, you know, terrible crisis.

They're losing the war. the hero, is in the fight, but separates and goes off to learn something really important and

comes back and joins the struggle.

and success is never guaranteed. You know, it's going to be hard.

Clinician Training and Practical Implementation

You might fail, but you're going to try anyway. And so when I ask my patients, is there somebody in your, in your, in your life that you would like to be an example of the hero journey for them that they can look at?

You realize that, yeah, you're doing something really hard. There's no guarantee that you're going to be able to beat back your arms. You're going to beat back your terrible disease.

But you're clearly doing the work and you're not complaining. You're just doing the work. And like, I am so inspired by the fact that you are in there doing the work on your healing journey.

My, my, kids were quite young. They watched me, you know, become profoundly disabled. Watch me, you know, working out properly abled, get working out, getting more and more disabled.

And then saw me doing the actual stimulation, sweating and pain and doing all that work. And, you know, they talk about how inspiring that was, that I was doing the work even when I was, you know, getting worse.

Yeah. And my patients talk about the power of pain into I have a hero's journey here. And yeah, I, I may or may not. I don't know how far I'll get on my recovery, but I'm going to do the work.

I'm going to be the inspiration for my children and my grandchildren that I'm doing the work. so incredibly powerful. And then think about which of the lifestyle domains that you want to tackle first.

And start talking at the pace that you can manage. Now, based on my what I've seen is people have the highest return. If you're ready to clean up your diet, get rid of the sugar, the processed foods, fast foods, eat, eat meat, fish, cooked vegetables, soups and stews.

No gluten, no dairy. No eggs. and that, in my experience, has the largest effect size. If that's what you're ready to do, you can sit a start date, and that's where you start.

If that's not what you're ready to do, then, you know, have a conversation with your family about what are the next steps that you could manage. Perfect.

Yeah, that's a great, great start. And everybody can, you know, I think relate to that. I love that you started with the why and you were so eloquent about that piece.

For everybody in the audience who, you know, we'll call them are summit junkies who have been following you, listening to you and bring your story. And, you know, they feel like they're in process with those things that have been named.

Are there any advanced tips that you would recommend for them at this time? You know, I think it's super helpful to, add another, lifestyle domain. so, right now I'm realizing that my hamstrings are too tight.

So, you know, I, I've put my strength training on hold and, like, okay, I got to really work on all of my stretching and flexibility. do more about what I want you to do is to keep reevaluating your life, your, strengths, your weaknesses, where your your pains are, and then realize, okay, perhaps I have to adjust my self-care routine and spend more time in this area.

So for me right now, like, oh, yeah, I'm not spending nearly as much time, stretching because I would much rather do my aerobics, in strength training.

and so, like, okay, I'm going to have to reprioritize, and practically have to reprioritize sleep because I have so many ideas. and, you know, I, I love my ideas.

I would be, you know, I'm happy to suddenly realize. Oh, shit, it's almost midnight. Yeah. And I should have gone to bed at night. and so I've had to do things like set alarms on my phone to, get myself to pull away from an interesting project.

You will find that you need to. You will benefit greatly from periodically looking at. Okay, what what should I focus on now? And make adjustments to your self-care routine.

it will be different for all of you. It might be sleep. It might be stress. It might be, getting more into that parasympathetic state. It might be balance work.

it might be, working on strength training because you had too many, too many steroids. And we have to worry about your bone mass and your muscle mass.

So we have to do more strength training. But we look at all these modifiable lifestyle factors diet, stress, sleep, connection, exercise, the mental, emotional, spiritual side.

Advanced Self-Care and Closing Reflections

they're all important. It's not that we can ignore all of them or any of them. but how much time you're going to spend, in your day focused on which of those domains next.

Yeah. Beautifully said. What a wonderful. Where can people find your work and follow you. Well the first thing I want you to do is go follow me on Instagram @drterrywahls you see what I'm cooking, eating, doing.

You get to see me in my garden. and you hear the various things, that I'm up to, on, Facebook, and Twitter, Terry Wahls and my web page, terrywahls.com go there.

Be sure to sign up, for, my email so you can get, the various blogs and all the stuff that's going on there. Wonderful. Well, you know, or actually, you may not know this, that your journey is something that I do.

Strength. many, many times along the way for me. So just know that your ripple effect is huge, much larger. Yeah. You know, I want to tell everyone who's listening here that.

What? When I was going downhill, I'd expected never to recover. And I was taught that functions once lost never come back, with progressive MS. and so whatever you've been told by your medical team in terms of how, much recovery is possible or not, always remember that there are things that you can do.

Ask yourself that question am I doing all that I can and unfortunately ask myself that? And I said, well, yep, I could be doing more. And I kept at it.

Beautiful. Yeah, I, I would actually think about you when I couldn't raise my arms up to brush my teeth, because that went on for five years. I was like, well, okay. But she's still working on that.

So, you know, we'll we'll figure this out eventually. And I still think about that often when I brush my teeth, it's like, I can't believe I get to do this now.

What a gift. Oh, God. Yeah. You know, I did all of that stuff. I mean, I was doing a lot, not to get better, and I was doing all that electro stimulation.

Not to get better because I knew recovery wasn't possible. My hands were still working. It's like, God, you know, I can still feed myself, brush my teeth.

I could wipe my own. But. And that's really, really valuable stuff. I didn't want to lose that. so I think that's tough for granite. It's amazing. So yeah, as soon as you're thinking like, oh my God, you know, I did about.

The little. Things I am, I'm thrilled to be able to take care of, that aspect of my personal hygiene. That's exactly. Well, thank you so much for sharing your passion and your joy and your body of work with us today.

And, we just so appreciate you.