



Essential Alchemy

The Ancient Art of Healing Naturally

Season 1, Episode 6: Connection Between Diet, Lifestyle, and Pain with Terry Wahls, MD

Jodi: Hi. I'm Jodi Cohen. And I'm so excited to welcome Dr. Terry Wahls. She is an Institute of Functional Medicine certified practitioner and a clinical professor of medicine at the University of Iowa, where she conducts clinical trials.

She's also the author of *The Wahls Protocol: A Radical New Way to Treat All Chronic Autoimmune Conditions Using Paleo Principles*, which mine is dogeared. And there is a new version that's just out, that's updated and so much better.

And one of the things I vastly admire about you, Dr. Wahls, is that you are one of the first to really pioneer the plant-based diet. And I'm hoping that you can talk a little bit about the benefits of plant diversity in the diet and why that might be helpful for the microbiome and the vagus nerve.

Dr. Wahls: Oh, sure. So, if we think back over the 6 million years that humans have been separate from primates, we've been eating plants most of that time. We had this huge diversity of our plants.

Then about 2.5 million years, we started eating more meat, more bone marrow, more brains, more shellfish, and our brains grew larger, but we're still eating a lot of plants.

And then 200,000 years ago, we started cooking our food. We didn't eat quite as many plants. Our guts shortened, and for the last 100,000 years, we've also added some fermented foods, but still, if we look at the hunter-gatherers, our ancestral mothers and fathers, we know that they were eating about 200 different plant species every year.

Of course, that would fluctuate with the season and with the locality. And there are many versions of the ancestral diet, but what is the most common theme is this immense diversity, both of animal species and the plant species.

And these plants were really important signaling molecules to us that set our microbiome and our bacteria in our microbiome, eat the food, break it down into smaller and smaller molecules, make more vitamins. And then those smaller molecules get into our bloodstream where they will speak to our immune cells and influence our vagus nerve, influence the neurotransmitters in the gut and in the brain.

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Dr. Wahls: So, I think as a species we know for at least 6 million years, we've been omnivores, eating animal material and plant material. Very few societies that existed that ate only animal material. And it wasn't until relatively recent that we couldn't exist eating only plant material.

We have much more experience as a species eating both plants and animals, hugely divergent. And I think we really rely on those signals to keep our chemistry balanced, to keep our microbiome balanced, to keep our sympathetic/parasympathetic nerves balance.

Jodi: Right. And when we're lacking those raw materials, the plants, we don't get the same signaling molecules, and so the whole system kind of goes out of whack.

Dr. Wahls: Correct.

Jodi: And can you just quickly share your Wahls Protocol, what you recommend in terms of diversity, please?

Dr. Wahls: Absolutely. And I try to make this incrementally possible because I know many people doing the standard American diet have a terrible diet, lots of fast food, lots of sugar, lots of processed foods. But here's sort of the stepby-step process.

Step one, ramp up the vegetables, reduce the sugar and the processed foods, and get closer to a Mediterranean diet. So that's one of the pre-Wahls. Once you get to the Wahls, we want you to be gluten-free, dairy-free, egg-free, and a roll of nine cups of vegetables.

Jodi: Which seems like a lot out of the gate.

Dr. Wahls: Oh, yes. My patients would be like, so is that a week doc or a month? No, that's per day.

Jodi: Right. But you really need all of that diversity, especially if you've been depleted for so long to turn on the signals again.

Dr. Wahls: And I don't want people to be hungry. Basically, I want you to have your sufficient protein and lots of non-starchy vegetables. And I put it proportionally the green leafy stuff, kale, Swiss chard, deep lettuces, parsley, cilantro, sorrel, amaranth, Lamb's quarters, dandelion greens. So, lots of edible greens, which is really fun, but be sure you identify your plant because there are poisonous plants too.

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Jodi: And I'm curious because I know you implemented this protocol in your own healing from MS. And I'm curious how long it took before you started to feel better when you started eating this way?

Dr. Wahls: This is sort of wild. So, here's my journey quickly, Jodi. I am a lowfat vegetarian for 20 years. I'm diagnosed with MS in 2000. I continue with the low-fat vegetarian diet, thinking that was the best thing for me.

Jodi: Right. Because that's what we're told.

Dr. Wahls: That's what we're told, and I'm an academic professor, so yeah. So I did that. Saw the best people, took the newest drugs, and within two years, it's very clear I'm relentlessly going downhill. My physicians told me about the work of Loren Cordain.

I read his books, his papers, and after a lot of prayer and meditation, I give up all grain, all legumes, all dairy, and I go back to eating meat. I continue to go downhill. I'm in a total Klein wheelchair. I'm taking the biologic drugs, ever more potent drugs again, seeing the best MS doctors in the country.

By 2007, I'm having brain fog. I have profound fatigue. It's a struggle to walk 10 feet using walking sticks. I cannot sit up in a regular chair. I discovered the Institute for Functional Medicine. I take their course. I have a longer list of supplements which I add, and then I had this really big aha.

Like what if I redesign my paleo diet based on what I've learned from my review of the basic science, what I learned from functional medicine, and I look for the food sources of these nutrients? So that's several more months of research, and I redesigned my diet.

I'm still following the paleo principles, but now it's very structured. And to my amazement, it's just stunning. Within three months, my fatigue was gone. My brain fog is gone. My trigeminal neuralgia, which had been for decades--

Jodi: We should talk about that because the trigeminal nerve and the vagus nerve have a connection.

Dr. Wahls: Yes, we should definitely talk. So, that had been a problem since 1980. I had episodes of physiological face pain here, pain more frequent, more severe, and in 2007, they were far more difficult to turn off. And so, I had come to terms, Jodi, that I was going to become demented. I was going to become bedridden.

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Dr. Wahls: I was so afraid that my face pain would be permanently on because when it was on, sound triggered the pain. [Inaudible] triggered the pain. [Inaudible] triggered the pain. Talking triggered the pain. A touch from my children triggered the pain. And so, if it got to the point where it was permanently on, it was very difficult to imagine existing like that.

Jodi: Right. And the pain signals, like one thing people don't realize, is it's a nerve signal and sometimes kind of in like a multi-sensory chemical sensitivity or fibromyalgia, the cell danger response it keeps firing, and it just needs to be turned off.

And by resetting your gut microbiome with your raw materials so that the right signals can be sent, you can recalibrate that signal, like almost return to factory settings so that it's not firing all the time.

Dr. Wahls: What we may not appreciate is that any sensory input when the gains turned all the way up becomes intensely painful. Light will do that. Sound will do that. Temperature, intensely cold or hot, will do that. So, any signal that's the gain, the amplitude is turned all the way up, it becomes intensely painful.

So, when this would be turned in that summer of 2007, it would be so horrific that all my other sensory input would be whited out. And at times, it became so intense that I could not maintain muscle tone, and my knees would collapse. And so, that's why in the summer of 2007, it certainly looked to me like I had this incredibly frightening grim future.

Jodi: And that's what's amazing. We talked before we started recording about kind of where we are in the world and how we go through a grief process that allows you to detail that. At the end, it's almost like you have a choice. You get to choose to feel powerless and to just allow circumstances to take you on, or you have a choice that you can kind of step up and make your own choices.

And it's so impressive. Like I'm hoping that anyone who's listening who might have any of the symptoms that you mentioned is really empowered to know that they can change their future just by adding in more plants.

Dr. Wahls: I sort of want everyone to know that as grim as my future was, one of the things that I'd been very impressed with was the writings of Viktor Frankl, whose premise was between every event in your life and your response to it, there's a space. And in that space, we make a choice.

Jodi: Yes. I put that all the time.

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Dr. Wahls: So, I have two young kids, and they were eight and five when I was diagnosed with MS. I knew that my mission in life was to have them be successful adults. And I thought I was going to teach them how to be successful adults by teaching them martial arts, by mountaineering, by kayaking, doing wilderness travel.

And it became pretty quickly apparent that that was not going to happen. So, I had to think very deeply about, well, this was still really important to me. What tools do I still have? And my tools kept getting smaller and smaller and smaller. And finally, the only choice was we're going to get up and go to work every day. And then they're going to have more chores.

And we're going to talk about the fact that life's not fair, but we get up and do the best we can anyway. And what I began to ultimately realize was I can either give up.

And I'm teaching them that when life gets hard, you give up, or I could carry on and do the best that I can and teach them all sorts of terrible things will come to you, but you're going to get up every day and do the best you can anyway.

Jodi: That's exactly the choice I made when Max died. And it's really what you're talking about is the shift from victim mentality into personal responsibility.

And that pause, this is actually what motivated me to do *The Parasympathetic Summit*, this idea that in order to pause, we have to calm our nervous system because when we're in that state of fight or flight, we can't think clearly. It literally shuts off.

It's basically the body just allowing us to make the next best move to stay safe, but we can't see the big picture. So, the moment we can kind of ground ourselves and be calm, all of a sudden, all these other possibilities open up to us.

And one of the key things that I love about what you're doing is I think that the diversity of the plants really turns on the microbiome, which is one way that you can turn on the vagus nerve and allow that to happen.

Dr. Wahls: And you'd be glad to know I spend more time talking about the vagus nerve, about gargling, about singing, about humming, about breathwork, about gratitude so we can be even more intentional about getting ourselves into that parasympathetic state, that rest and digest.

So, the good news is I made the decision that I don't know everything. I got to keep learning. And so, I keep reading. I keep learning. I keep reading people, even people who completely disagree with me, like, okay, I could be wrong.

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Dr. Wahls: And sometimes, I realize I am wrong, and I have to keep adjusting my point of view. So, I tell people that as soon as someone that you're reading or listening to says they are completely right, stop listening to them. They're definitely wrong.

Jodi: That's true. What is the Voltaire quote? I may not agree with anything you say, but I'll defend to the end your right to say it. Sometimes I like to listen to other points of view just because it either makes me think of, oh, I wonder if that's true and look at it, or it forces me to better understand what I believe.

Dr. Wahls: I think it is very helpful to say, okay. So, what could be true in this point of view because there may be some elements of that that I could agree with.

So I had this vigorous debate with the carnivore people, and so as we were talking back and forth, I thought, okay, well, what certainly could be true is that my ancestral mothers and fathers 40,000 years ago in Northern Europe during winter might've only been able to eat meat or had to fast during winter and probably had very few carbohydrates.

So, it could be true that we episodically throughout history are carnivores only for periods of the season. And so that was a very important aha moment, like, okay, that makes sense. I said, if you can find a culture that is carnivore only throughout adulthood, let me know. I would love to look at that data.

So far, they've not been able to find anyone. I can't find anyone, but we did come to an agreement that likely, depending on where you are in the world, there are seasonal periods where our ancestral mothers and fathers were either carnivores or fasting.

Jodi: You know what's really interesting? I tend to be more paleo. I like meat. It makes me feel better, but I decided because my liver was kind of having issues that I would try going vegan just for a period, just to really see. And the most immediate thing that I noticed was I was a lot less angry, and I was a lot calmer.

Dr. Wahls: Well, I think likely it was a couple of potential issues there. One is your genetics, of course. The other is your microbiome that determines which genes are on and off.

Jodi: Yes. Let's talk about that, the microbiome and turning on genes.

Dr. Wahls: So, your microbiome will turn genes on and off. Your exercise will turn genes on and off, or the amount of time I spend in the parasympathetic versus sympathetic state will turn genes on and off, my vitamin D level, my self-talk, my social networks.

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Dr. Wahls: And so, it may be possible that there's a period of time where the vegan diet is the right diet for you. We may discover that after your microbiome has readjusted that we may go through a period where the Mediterranean diet might do better for you, or you might find that your B12 levels start dipping down. Some of your iodine levels dipping down, and you discover that seafood.

Jodi: Yes. That's what I was noticing. Yeah. I started craving meat again at about three months.

Dr. Wahls: And so, it's the thing with ketogenic diets. So, a lot of folks we feel great on a ketogenic diet, initially. A lot of great things happen, but over time we begin to develop some nutritional depletions, and we're craving different foods.

So, I'm beginning to have a lot more respect for the fact that we're omnivores and that we probably do best where we vary our dietary exposures.

And so, I spent a fair amount of time now trying to teach people how to pay attention to their subtle symptoms. And that way, we can adjust and learn based on my response to symptoms. And that you may find you do the best if during the winter I have a different type of diet, which is probably higher in protein, higher in fat.

And then during the summer, where there are more carbs, I get to have more plants. I need less protein, and I'm eating more out of my garden that's still a low-glycemic index. But then fall comes, and my diet really matches a little more seasonality.

Jodi: I think that makes a lot of sense. And that's actually one of the reasons I got into oils is this idea of kind of matching where you're at, at that particular time, and being able to use— With oils, they distill them on the spot.

So, they kind of capture them at their peak of seasonal energy and whatnot. I did want to loop back to what you were saying about the parasympathetic state and turning on the microbiome. I'm hoping you can elaborate on that a little more.

Dr. Wahls: Well, we have a lot more inflammation that the food we eat, it is metabolized by our microbes into smaller and smaller molecules that would get into our bloodstream. And these small molecules will influence the neurotransmitters. They appear to also influence vagal nerve activity.

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Dr. Wahls: My scientific colleagues and I are not yet smart enough to understand that precisely, but I am very excited to tell you that we are writing grants to understand this more thoroughly. And we've just written a proposal to look at my freezer and my colleague's freezer to analyze the metabolites.

So, this is the stuff that's in the bloodstream that we collected at various time points in my first study to see how the bacterial metabolites change as people implement the diet.

And then, we'll be able to correlate that with change in clinical outcome, change in dietary adherence and develop some theories that we can then test on another 100 specimens, actually 400 specimens that we have in my freezer.

In science, we get interesting ideas. Then we test them at a smaller sort of test group of subjects to test out our theories, make new hypotheses. Then we have preliminary data. Then we write for bigger multi-million-dollar grants to study the big questions.

Jodi: Right. And that will really kind of validate what so many of us have been noticing, the gut-brain axis and the way things communicate. I love that you're validating that with science. Thank you.

Dr. Wahls: The way science works in the research world is you get some brilliant clinicians who see an interesting case, and they write it up, and then they write up a case series, so the more interesting observations. And then someone says, okay, now I'll run a prospective little clinical trial to see what happens if we do this. Do we hurt anyone?

Could it be safe to run in a bigger study? If that goes well, then it is randomized. You get the intervention, or you don't get the intervention. Again, small pilot safety data, then you do million-dollar-plus studies. And so this is damn hard work.

Jodi: It's incredibly hard work. What's super interesting is you're exploring kind of the bottom up, like what you put in the gut influences the brain. And then I know that you also have strategies for kind of the top-down, things that you do in your daily life to turn on your parasympathetic state and your vagus nerve. Can you talk a little bit about what you do personally and what you recommend?

Dr. Wahls: So, when I get up in the morning, the first thing I do, gratitude. So, I go through one to three gratitude visualizations of some events, timeframe in my life. And I'm thanking a parent, friend, colleague, mentor who helped me with a particular task.

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Jodi: I do that too. Can you talk a little bit about how gratitude activates the parasympathetic state?

Dr. Wahls: Well, what gratitude does is it lowers your cortisol. It lowers the inflammasome, which is really important now with COVID-19. It resets the NF-kappa B. And it appears to shift that balance between sympathetic/parasympathetic state.

And you can do this by writing gratitude statements. You can do it by saying them out loud. And it's interesting to note that saying them out loud with the same kind of loud voice I have right now is much more effective than just whispering. I'm not really listening to it.

Jodi: I sometimes write people notes, or I just send a nice text, but the more I try to kind of pay it forward.

Dr. Wahls: Right. So, if we handwrite it, that seems a little different than typing but typing that's still helpful. Typing is better than whispering. If you're whispering like to your lover, maybe that works just as well. At that part, I don't know. No one has really tested that.

But if you just whisper it to a room by yourself, we do know that saying it out loud is much better than whispering to an empty room.

Jodi: Wonderful.

Dr. Wahls: No has tested whispering to your lover. That might be just as good as saying it out loud if you have any emotional context.

Jodi: Anyone that's listening, that's a very easy thing. You wake up, and you say as loud as you can at least three things that you're grateful for.

Dr. Wahls: And now because the world has changed so much in the era of this pandemic, a natural biologic response, when you have a new environment, is to be hyper-alert, to be uncertain, to be anxious.

Jodi: To be in a sympathetic state.

Dr. Wahls: That is the natural biologic response. We're all in that. Therefore, we have to intentionally work at getting out of that because if you're in that sympathetic state all the time, it will drive your cortisol. It will raise your blood sugar. It will accelerate autoimmunity. It will accelerate obesity, diabetes, chronic disease, terrible things.

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Dr. Wahls: Therefore, I'm spending more time doing gratitude in the morning. I spend more time with my four, seven, eight breathing pattern — inhale four seconds, hold seven seconds, exhale eight seconds.

Jodi: Right. It also activates the parasympathetic state because the lungs are innervated by the vagus nerve.

Dr. Wahls: And the key thing there is you want to exhale twice as long as you inhale. You could do the oxygen advantage breathing technique, where you inhale and exhale three times as long. So that's another variation of that. Then I do gentle exercise, and I do my sauna, and then I do voice work in the sun.

So, I'll read for the first 20 minutes. And then I'm doing mama, mama, mama, mama, mimi, mimi, mimi, mimi, may, may, may, may, may. And I go through my various voice exercises.

Jodi: Which also activates the parasympathetic nerve, the vagus nerve, because it innervates your throat and your voice. And this is far easier than using a tongue depressor to gag yourself.

Dr. Wahls: And then after my shower or actually after my sauna, I go in. I put a mud mask on my face. I'm brushing my teeth. I'm flossing my teeth. And again, I'm doing another round of voice lessons, and then when my clay mask has dried, I take my shower.

And then I come back out, and I do more rounds of gargling. So that whole morning routine is about two and a half hours. And life's incredibly busy right now. I have to admit. In the morning, I wake up, and I feel like I got too much to do. I'm not going to do all of that.

And then I think about my face pain and that when my face pain turns on, it's the most horrific pain I've ever endured in my life, worse than broken bones, worse than surgery, worse than active labor, worse than pushing my little boy out.

Jodi: Yeah. I haven't experienced anything worse than active labor, so I have tremendous compassion. Yeah.

Dr. Wahls: And I know if my stress gets too high or if I get exposed to gluten, dairy, or eggs, or if I take too many flights in a month, my face pain turns on. So I may wake up and feel like I got too much to do. I don't want to do my routine, but I do my routine.

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Jodi: And that's kind of an important point, I think, this idea of creating healthy habits and just committing to them. We've been trained to brush our teeth twice a day, sometimes more, and that's a habit and the more we can commit to gratitude and breathing and anything else that helps activate our vagus nerve, meditation, yoga, the better we are able to show up during the day.

Dr. Wahls: Now, the other reflection I'd have Jodi is for decades, my face pain was very difficult, getting steadily worse, more incapacitating, and more disabling. And it was my fear that it would turn on, and then I would quit eating, and there was going to be a very miserable moment in my life.

And now 30 years later, 40 years into this really, I see that face pain as this tremendous gift because when I'm lying in my bed in the morning, and I'm thinking about I got too much to do. I'm not going to do my routine. And I go, no, you're going to do your routine. You're not going to let that face pain turn on.

And so, this is my barometer for my self-care. If my sensation on my face begins to change, it's not quite normal. I know that I am at risk of having my face pain turn on, or if my face pain turns on, I have to sit back and go like, okay, what was my exposure? How could I improve my self-care?

And so that's how over time, I've prioritized my self-care routine in the morning. And there's other part of the self-care routine that I do in the evening because that's how I keep my face sensation normal. And that's how I keep all of this, the trigeminal neuralgia flares at baseline.

Jodi: I love that. And one of the things that you said that I want to really highlight is this idea that our worst pain can be our greatest gift if we can figure out how to turn that into something positive. So, thank you for saying that.

Dr. Wahls: That's the message I'm giving to my tribe is we will all, unless you die unexpectedly at a very young age, all of us will experience loss. We will have missed grades, missed promotions, lost jobs. We will lose things of incredible value to us.

We will lose people that are treasures to us: our parents, our siblings, our spouses, our children. We will lose things and people that matter immensely to us. So, we're all going to have to face loss, and however painful it is, there is an opportunity to learn something about yourself, about life, about meaning, about purpose as you process and experience that loss and that grief.

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Jodi: Yes. Pain is the biggest motivator for transformation because you don't want to stay stuck in it, so you have to figure out how to get out.

Dr. Wahls: Yeah, it's not that that loss is diminished by learning. We will still have that pain. We will still have that sorrow, but I can choose to learn. I can choose to learn. I can choose to find that there's some insights, some new wisdom, some new tools that I can have that will make me more useful to my tribe, more useful to my family, more useful to my society.

And so that's the message that I'm giving to my tribe now as we're all trying to figure out how to navigate this new world. This is the message that I'm thinking about as I'm like, I sure wish I wasn't having to deal with all of these things either.

But I'm sure there are things that we can learn. It's really helped me to think about this for society. I'm hearing from so many people that they are cooking for the first time. Like oh my God, that is--

Jodi: Or really spending family time.

Dr. Wahls: So powerful that we are getting the message to cook. And another message we're getting is to grow your own food. Put a pot out, put some seeds in your window sill, on your deck, a planter by your front door, a little green spot in your yard.

Jodi: And having your hands in the soil is another great way to diversify your exposure. Yeah. It's amazing.

Dr. Wahls: Get your place grounded. And as I'm meditating in the morning, I'm thinking about, okay, so what do I have to learn? What does our family have to learn?

And what are the good things that our society are learning? And that makes me feel much calmer and more hopeful about the fact that these are hard times, but we'll get through them.

We're going to get through them as a society. And those of us who are resilient, who decide that we're going to learn and adapt to this new reality, we will be far more effective in this new reality.

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Jodi: Yes. There are some gifts, and thank you so much. So many tools that you share that are just so easy to execute immediately to activate your vagus nerve, turn on the parasympathetic state, and really help yourself navigate any kind of uncertainty. So, in addition to buying your amazing book, where can people find you?

Dr. Wahls: So Terrywahls.com, T-E-R-R-Y, Wahls, W-A-H-L-S.com. If you use forward slash diet, you get a one-page summary of the diet, which is very helpful.

And follow me on Instagram at Dr. Terry Wahls. And my wife does a great job getting pictures of our meals, short inspirational videos for me. And then I'm at Facebook and on Twitter at Terry Wahls.

Jodi: Thank you so much. This was amazing.