



## Episode 507: Dr. Greg Eckel on How to Keep Your Brain Healthy As You Age

Child: Welcome to my Mommy's podcast.

This podcast is sponsored by Just Thrive. A company very near and dear to my heart as I have seen the difference firsthand that their products make with my own family. And I've heard from so many of you sharing your positive experiences as well. I truly love all of their products, but I have to highlight a few that I love especially much. Their breakthrough award-winning probiotic is, hands down, the best one I've tried. It contains a proprietary strain called *Bacillus indicus* HU36, which produces antioxidants directly in the digestive system where they can be best absorbed by your body. These are also heat-stable probiotics, meaning they can actually survive the harsh environment of your digestive system and get where they're supposed to go. Their K2-7 is the first all-natural pharmaceutical grade K2-7 that supplies the optimal recommended dose for heart, bone, and tooth health. I'm also currently obsessed with their Prebiotic drink, which tastes like a delicious tropical drink and it creates a noticeable improvement in my digestion. And another quick tip, their probiotic is heat stable so I can easily add it to smoothies and even baked goods for my little ones who aren't great at swallowing pills yet. These are some of the only supplements I take with me when I travel, and I recommend them to friends and family all the time. Check out all of their products at [justthrivehealth.com/wellnessmama](https://justthrivehealth.com/wellnessmama) and use the code `wellnessmama15` to save 15% on everything.

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Katie: Hello, and welcome to the Wellness Mama Podcast. I'm Katie from [wellnessmama.com](https://wellnessmama.com) and [wellnesse.com](https://wellnesse.com). That's wellness with an E on the end. And this episode is all about cutting-edge brain regenerative technology and how to keep your brain healthy as you age. I'm here with Dr. Greg Eckel, who has spent the last 20+ years of his life developing and refining his unique approach to chronic neurological conditions. In addition to his experience in clinical practice using a combination of naturopathic and Chinese medicine, he has a deep personal connection with this, which he explains in his own words, at the beginning of this podcast. And he took a deep dive into this research and has been on the front end of some really cutting-edge technology, but we also talk about some common everyday things we can all do to improve our brain health. We talk about things like what misfolded proteins are and what they do in the brain, why we're seeing a rise in brain-related conditions, the surprising factor he sees in many brain-related diseases, and it's not what you think, what Vsels are, which are very small embryonic stem cells, and how this with certain lasers are providing really amazing anti-aging and brain health results. And then into more broad things like diet,

supplements, sleep and other factors that really impact the brain. Definitely a lot of information in this one. So, let's join Dr. Greg. Dr. Eckel, welcome.

Dr. Greg: Oh, thank you.

Katie: I am excited to chat with you about the brain, specifically. But before we jump into that, I have a note in my show notes that says that you hooted the spotted owl on the Olympic Peninsula, and I have to understand what that story was.

Dr. Greg: Well, I speak owl. So as an undergrad, I was really interested in forest ecology and environmental science, I still am. I actually I think we should all have a bumper sticker that says, "Save the humans," not just save the whales. But I work for the Forest Service in Quilcene. It's on the Olympic Peninsula at one of the most beautiful places on the planet, and I learned how to call or hoot the spotted owl.

I remember Jay, he was from North Carolina, he was part of the Forest Conservation Council, and we basically put little recordings and we were like, in the shower in the mornings like, hoo, hoo, like hooting like an owl, and then we would go out. We finally, you know, it was such a rush the first time I did it. Was, you know, you drive up to the top of the mountain top and you hoot out the call, and they answer back and it just makes the hair on your arm stand on edge. It's, like, so beautiful. So all summer we hooted the spotted owl, so it's kind of a fun, you know, party trick when you're camping up there, to talk to the owls.

Katie: That's amazing. I'm relatively certain you're my first guest ever who speaks owl. That's really cool.

Dr. Greg: Yes. They're one of my, you know, totem animals at this point. Yes.

Katie: I love it. Well, that, in and of itself is fascinating, but not actually what you're known for. You're known for your work in brain regeneration and brain health. So to start broad, I would love to hear how you got into that area to begin with?

Dr. Greg: You know, this story starts 11 years ago with the meeting of Soraya. And Soraya was 6'1, dreadlocks down to the floor, really just an amazing goddess. And she found her way into my heart like no one ever on the planet had ever done before. And, you know, we blended our families, it was her three kids and my two kids. We even had a maid named Alice like "The Brady Bunch." We blended our medical practices, and she was a certified nurse-midwife, nurse practitioner, I'm a naturopathic doctor, and everything was just going just fine.

And you know, actually, it was better than fine. It was amazing and magical. And then we moved and Soraya became obsessed with this one orange Fiestaware plate. And, you know, I thought big...look, we move things get lost, you know. But it was this one plate, it became like an eerie Groundhog Day and dinner conversation with me and the kids of like, "What's going on?" "Mom's looking for that plate again." And you know, she would go through the kitchen and then the cupboards and then down the hallway where we kept the camping gear, to the garage, and then finally wind up in the attic. She'd come back frustrated. And then, you know, a day or two later she'd do the same thing, and it started to become concerning in that.

Then three months go by, Chelsea, my office manager one day came to me and said, "Hey, Doc, Soraya just left the building." I said, "What are you talking about?" Said, "Well, she just left the building. She was in her white lab coat and stethoscope and just started wandering around the streets of Portland, Oregon." And at that moment in time, I knew that we needed to do something. And we cleared the schedule, and that was just three months right between moving to when she strolled out of the clinic.

And you know, we went looking for solutions and answers and at that point, you know, she was 42, we thought it was the general culprits. Maybe it was, you know, perimenopause early, or mold toxicity, or, you know, some of the things that you would think for somebody that young. Well, fortunately, I've always said she was one in a million being, but unfortunately, the experts agreed with me on that and she got this diagnosis called CJD, Creutzfeldt-Jakob disease, which is a rare about 330 cases of North America a year. And it's a rapidly progressing dementia with no known cure.

Now, I being, you know, uniquely positioned as husband and physician, I swung for the fence. What I discovered didn't help Soraya one iota. I mean, we, you know, at a point in a progression and maybe your listeners can relate to this, you know, you're looking for solutions and answers and you're just not getting them. So at some point, you have to, with grace and a lot of prayer kind of, not throw the towel in, but change your outlook and expectations.

And so, I switched from searching for solutions to just surrounding her with love. And, you know, when she passed, our nurse-midwife kind of death doula said it was the most beautiful death she had ever attended. You don't really hear that so frequently when you talk about loss or somebody's death. But it also, you know, I didn't want my suffering to be for naught. And so I, you know, kind of bushwhacked and made it up as I went, because there were no solutions for neurodegeneration. So, you know, I have a roadmap, I invite folks to say you don't have to go it alone and we have a lot of options for you.

So I quickly became a brain regenerative specialist in that process. And even through my grief, the loss, and that whole process, you know, I came out whole with an open heart and just a zest for the preciousness of life, and a fire and a passion to help as many people as I can with neurodegeneration in their brain health, and

then even on a longevity front. So, you know, I guess I arrived in brain regeneration in a school of hard knocks there, and really went for it. And really, I kind of call them Soraya's gifts, is what we use.

Katie: Wow, what a powerful story. And, I'm sorry she's not with us anymore but it sounds like you've truly found the gifts and the gratitude in that and using it to help so many other people which I'm sure she would be so happy to see.

Dr. Greg: Yeah, you know, it's interesting, while she's not in her body, she really is here with us and in such a beautiful way, that's the piece for me that I have this zest for. We don't know how long we're on the planet and how long we get to, you know, actually feel and taste and touch and look in people's eyes. And so it just gives this richness to what we're doing here. There's a law of physics, right, that energy can't be destroyed or created, it only changes form. So I like to say she left her body maybe way too soon, but she's still present in so, so many ways. And just the lives that we're helping here and the conversations we get into people, it's really quite extraordinary.

Katie: Wow, it reminds me of the stoic words, Memento Mori, "Remember your death," which actually I have tattooed on my wrist as a reminder of that very same thing of we don't know how long we're here. And how do we make the best of it and help the most people in the time that we have? And I know that this, from my research, at least, led to your very unique approach that also can involve helping people with Parkinson's which will not be the entire focus of this podcast. We'll definitely go broad into more general brain health. But I would love to just hear a little bit of high level about that as well.

Dr. Greg: So this component...so I said Soraya was one in a million and this diagnosis of Creutzfeldt-Jakob disease is about 300 cases a year in North America. So I didn't want to specialize in CJD, but I got in on the prionic textbooks. So prions are misfolded proteins that don't have any genetic material in them, they're very odd. And oftentimes, when you see them in the literature, they're called infectious agents.

And in there, Parkinson's is in there, beta-amyloid plaque for Alzheimer's and dementia, there are tau proteins, Lewy body proteins of dementia. So there's all of these misfolded protein diseases, which is neurodegeneration. So I picked Parkinson's because, you know, I'd been in practice at that point, 17 years, I'm now 21 years in practice, and I had a lot of folks with that diagnosis. And it's like, wow, well, I'm uncovering these therapies that can really help with this. And so we put them together in what I call my FAN-C approach to Parkinson's disease. So I wrote a book called "Shake it Off: An Integrative Approach to Parkinson's Solutions." Now, there are other book titles coming around all of the facets of brain health, so if your listeners and viewers are watching and they're like, "Well, I don't have Parkinson's disease." Hang in there because this applies to really our brain health, is the discussion.

But I wanted to really niche out and focus on these folks with this one diagnosis of Parkinson's. And so I wrote a book on it, I have a summit on the same title, and then I've got a bigger broader Brain Regeneration Summit. But on the process, that's how I picked Parkinson's. It was a big portion of my practice at the time. And the remedies, basically, the Soraya's gifts that I found really was applicable and I put that into my framework, which I call my FAN-C approach to brain health.

Katie: And I would guess from, I haven't studied brain health nearly as in-depth, obviously, as you have. But in studying other areas of health, it seems like often extreme instances of disease can give us kind of a really interesting insight into what early stages look like and/or on the flip side, what optimal looks like and kind of that progression. And seems like we can take the extreme and then learn how we can all improve from those cases.

Dr. Greg: That is it. That's so true. And so, you know, what we're seeing in clinic...so I'm not saying I'm curing disease by any means. But we are seeing stage two Alzheimer's reverse, we're seeing Parkinson's disease, people have no evidence of disease anymore. One patient in particular that I'll share her story with, Cindy, came in, she was really debilitated with a tremor, couldn't get dressed anymore. And basically was stuck on her couch because she was falling over, even with a three-sided walking support she was still injuring herself quite a bit. And pretty depressed at that because, you know, basically debilitated on the couch with Parkinson's. She found us and came out to the clinic for what I call Camp Nature Cures, it's the experience of brain regeneration here. And we treated her in that process.

And I got a call from her about a year later and she said, "Dr. Eckel, you'll never guess what." I said, "You're right, Cindy, I will never guess what. What's up?" She said, "My husband just told me to slow down walking in the park." I said, "Wow, when is the last time he said that to you?" And she said it has been over a decade. She had the diagnosis for 10 years, and basically, just, you know, was quickly going into full-on disability, not able to move off the couch. She really got her life back.

Now, while I can't claim that for everybody that we treat, we have about a 95% success rate of improving their quality of life here with our FAN-C approach. And that is, we leave the door open for that to occur. And we're iterating all the time I'm in the research and learning more and more about how do we help people's brains regenerate. And on that, you know, it even goes to the point of brain health and longevity. So from treating exactly what you said, treating the disease process and repairing there, well, then you can get into prevention. And then, we can get into the longevity discussion, which those are all so fun to get into. But, you know, we're seeing things that are not happening other places around the globe with these patients.

Katie: That's incredible. And you mentioned the term beta-amyloid plaques. And I'd love for you to define this a little bit more because I don't know it in a very nuanced brain health way, but I definitely come across this word often in a lot of my reading, and in research, and how this seems to be a key in a lot of these things that are going on. My basic understanding is that these things can build up in the brain. And for instance, like, deep

sleep is the time when our body flushes cerebral spinal fluid and helps break those down. But that's about the extent of my understanding. So can you give us a little primer?

Dr. Greg: Yeah. So the beta-amyloid plaques are around...they're misfolded proteins that get tangled up. They're called neurofibrillary tangles, they'll get in there and the technical term is they're gonna muck up your brain. So they get in there and they cause mayhem and they start other cells to misfold. So other protein structures will misfold and they kind of "spread" and I'm doing big quotation marks with that. In that, they're signaling other cells to misfold. So then that's what stops the transmission of the neurons and leads into dementia symptoms or Alzheimer is the biggest form of dementia, Lewy body dementia, those all go into the memory loss, etc. So those are related to, in Parkinson's disease, it's called alpha-synuclein is the misfolded protein. So you hit it spot on with your understanding there.

Katie: Okay. And as you mentioned, hopefully, most people listening are not dealing with Alzheimer's dementia or Parkinson's. But it does seem like these conditions are all on the rise and potentially happening at earlier ages. So conceivably, people listening could have some of the either risk factors or early stages and not know it. Why do you think we're seeing a rise in these conditions right now?

Dr. Greg: I think it's multifold. I mean, there is one component on levels of toxicity in our world. So you may see some ads out there around, you know, roundup, glyphosate, certain pesticides associated with triggering Parkinson's. There are heavy metals in our environment that get lodged into our brain that can be at cause. On the memory loss, it's an interesting component that it's almost in the innate wisdom of the body. I'm seeing unresolved traumas at the root of a lot of that. It's almost as if the innate wisdom says you haven't dealt with that trauma, and we're going to protect you at this point.

And there is a link and now this is a working hypothesis on my part. But even on ancestral traumas, as we've been on the planet for longer and longer periods of time, we're carrying these genetic lineages of our families and doing...you know, this piece that I went through with Soraya, we really got into what could have caused this to start in the first place? Because that is the trillion-dollar question of why do proteins misfold?

And ancestral trauma has actually come up on the list as far as creating epigenetic changes that then are rippling out in our generations now. So it's multifactorial, there's diet, there's nutrition, there's unresolved traumas, there's family lineage, the ancestral component to it. So it all adds up, and then on your own genetic platform as well. So there are some nuances there as far as how do you unpack that for somebody in a logical fashion? How do you investigate that all together, and putting it into a plan that will get you traction and movement.

Katie: That's so interesting. I was recently asked by a friend at a dinner party, what do you think is the greatest cause of human suffering? And my answer was unresolved trauma because of some of my own experience in

the last few years. And that kind of recurring theme that seems to be showing up in a lot of, to your point, chronic health conditions. And especially the generational side, which was a new research pathway for me.

I had Mark Wolynn on recently, who authored "It Didn't Start with You." And he explained what you talked about, that epigenetic change. And I'm excited for the future of that research. I think it's great that we're seeing and starting to understand that it's more than just the sum of the physical inputs going in the body. And I think that seems like, especially with the brain, gonna be a very, very important pathway to go down in continued research.

So I feel like we well established why these are problems and kind of what the extreme versions of them look like. I've also seen you write and say that you plan to live to be 150 years old, which would require a pretty healthy brain and a pretty healthy body. So I'm curious to kind of build that bridge now and talk about the positive side of all this, which is what can we do to improve our brain health?

Dr. Greg: Yeah, for sure. What has given me some chutzpah, so to speak, is seeing some of these chronic neurodegenerative conditions reverse to the point of no evidence of disease. And it's miraculous, to say the least, because it's not supposed to happen. You're not supposed to get your brain back after it's been damaged. And in seeing that, and having the privilege to sit with 90-year-old patients saying, you know, a lot of the theme with the 90-year-olds is, if I had known I was going to live this long, I would have taken better care of myself. And so, you know, it was like, well...so I took it to heart. I was like, "Okay, well, I'm listening to that. And if I wanna live to be 150, that means," you know, just things start to change when you start to project out there. But we are also living at an amazing time. We have technology now that is showing age reversal. So there's a way to measure the age of your cells, not just the chronologic age of like, okay, I'm 51 years on the planet, but how old do my cells think they are?

And you've seen this with you know, friends or somebody is the same age as you and either they look really way younger than you and you're like, how are you doing that? Or they look really older, you know, 10 to 12, 15 years older. Like maybe they were a smoker, maybe they had a lot of unresolved trauma, or you know, who knows what their situation was, but they aged quicker. And so we are showing on biologic age about 2.6 years age reversal. So my cells are telling me that they're 12 and a half years younger. And that feels really good. I also feel that young as well. So you know, when people come in and say, "Oh, I'm just getting old, it's just you know, normal aging." I'm like, "No, I call hogwash on that statement."

You know, the aging that we are promoting in our communities with our brains and with our brawn, and with community in a very, like, we're gonna not Benjamin Button it, like, age backwards together, but we are. Like, I want to be better this year than I was last year. You know, my 40s, were pretty good decade, I got healthier from 30 to 40. And now from 40, well, sorry, 40 to 50, and now 50 to 60, I wanna be even better than I was in my, you know, 50s. So, you know, why not? Why not age like that?

Katie: And it seems like we're starting to understand more and more about this being possible, and probably in a unique way, especially in the brain, from my understanding. In that the brain is capable of almost like regeneration, and neuroplasticity, and things that are at least slower in other areas of the body. I think we actually have technologies emerging that will let that happen in a lot of ways at a cellular level throughout the body. But can you talk a little bit about some of these new modalities that are kind of improving the body's capacity for healing?

Dr. Greg: Sure. The biggest lever that I have discovered is around VSELs. So they're called very small embryonic-like stem cell procedures. And these VSELs, when I graduated medical school in 2001, we did not learn about VSELs. And they were discovered in 2005 by Dr. Ratajczak, at University of Kentucky. And they were basically considered detritus waste because there was no active biologic activity in these cells that were found in the serum of the blood, until we found a way to activate them.

So these are cells that we were formed in utero in our mother's bellies that created us. They're embryonic-like, meaning they can turn into any cell of the body. They go dormant when we're born. Occasionally, they're activated when you have like a heart attack or some cardiac event. They'll come back alive or turn back on and act, you know, repair, then they go back to dormancy. But we've found a way to activate them with a laser and then guide them into the body for where they need to go. So we literally shine the light for where the cells that were activated by light need to go.

Katie: That's so fascinating. So to make sure I understand, these are cells that exist in our own body. So even though there's the word embryonic, it's not that we're taking these from embryos, these are our own embryonic stem cells?

Dr. Greg: Right. That's right.

Katie: I'm curious, just as a cross over there. I've read how, for instance, when a mom is pregnant, cells from her baby basically go in her body and can go to a place where there's an injury and help repair it. Are these a similar type of cell or am I confusing two different things?

Dr. Greg: It gets confusing quick because there's a lot of different cell lines of stem cells. So these are embryonic-like, they're not embryonic, right? So the embryonic are the ones that start with the 1 then go to the 2, then go to the 3 or the 4, then the 10,000 things of the human body. These VSELs help that, then there's also mesenchymal stem cells from the placenta, that then are also circulating back to mom to help repair. So there's a lot of stem cell action during the growing of another being in the belly, right?

Katie: Got it. Okay, but the ones we're talking about here are from our own serum in our blood?

Dr. Greg: Yeah. So basically, we pull your blood, we spin it down, and it's in the plasma, the clear portion of the...you know, the red blood cells go to the bottom, then usually a wax separates the serum up above.

Katie: So can you talk more about the laser aspect because I feel like this part is really new. And I've only read very, like, brief high-level stuff of this, but it seems really incredible, the potential of this?

Dr. Greg: Yeah. So this is a specific laser called a SONG laser that actually changes light into sound. It's got a refraction on it have about...it refracts the laser. So it goes from light to sound. So it's a sound wave that actually comes in. And on it, because of that refraction, there's basically information transfer forward and backward on the laser.

And so it's a specific, you know, Dr. Todd is his name, he owns the patent on that laser and he's the one that created the whole process and actually is the creator of this. So I wanna give, you know, due appreciation and a shout out to him for finding this out. I'm on his medical advisory board and heading up the neurodegenerative brain health front of the research there.

Katie: So what does the potential and the future look like both in the regenerative side when someone already has one of these more extreme versions, and/or in the preventative side?

Dr. Greg: If we reverse aging by 7 years, we would cut all chronic illness on the planet by 50%. So it is possible that we could, you know, really keep ourselves young. Not live forever, but keep ourselves young in that you know, preventing chronic illness, getting out of pain, having full mobility, having our strength, having our thought process and, you know, sharpness of mind, etc. So on the longevity front, you know, the sky is the limit. And we're coupled with the laser-activated and guided stem cell procedure, and we use hyperbaric oxygen, and we even use ancient technology like Chinese medicine as well. So all of those things wrapped together of meeting people where they're at, measuring blood and plasmalogens and other things like this of really working on brain chemistry, we can, you know, really make a difference.

You know, because of this process that I went through, I planted the flag in the earth to, you know, can we move the needle with neurodegeneration? The answer is yes. Can we do a better job of that? Certainly. Can we expedite those reversals? Yes. That's what I'm working on, it's what the people that I'm talking to in medicine, even outside of medicine I think bioenergetics and sound and frequency healing, I'm very interested in those topics. And really making sound frequencies because the laser goes into a sound wave, which seems to be repairing the brain. And it's also cartilage and...you know, I can go through countless stories of you know, people needing a hip, or a knee replacement, or a shoulder replacement, they don't need it anymore on imaging. Their body healed itself. So it's super exciting of what the possibilities are and really looking at easing the suffering and/or getting people back into a thriving mode.

Katie: What does access to these treatments look like right now? I know it's relatively new, is this something people are able to find in most places or if not, how can someone find it?

Dr. Greg: So right now because we're still working on regulatory process, so there's the highly regulated system of medicine in the United States, for better or worse. And so there's a handful of clinics using the VSEL technology. I am the center right now, in Portland, Oregon, and soon to have a clinic in Park City, Utah, around the longevity play as far as the brain regeneration component. A lot of folks are doing a lot of longevity treatments. But the program and the transformation is, I think, what sets what we're doing apart there. So we don't have a website for the providers. It's called Qi Generation, is the name of the company that owns the patents on the laser-guided and activated VSEL procedure.

The papers are just getting published. So there's been two papers published on the procedure. I'm hoping that there's a third coming out here in December around...it's 10 patients with heart disease and injection fracture, bringing their hearts back online, which is super impressive. So I'm hoping that one comes out in December here. So I guess my long-winded answer to your question is, it's not super accessible out there yet but we're really on the front edge and the front lines of this coming out.

Katie: Gotcha. And like we talked about, hopefully, most people listening don't have one of these more severe conditions that they're acutely dealing with. But there's so much to learn from those conditions that apply to all of us. And with that being said, it seems like with every aspect of health and this too, there's gonna be a very multifaceted approach. And I know you had a background in functional medicine before you even specialized in brain health, so it makes me curious kind of what the intersection of those two things looks like in other areas as well. For instance, starting with perhaps diet, which is...nutrition is my background. I'm curious if you're seeing any clinical evidence and/or in your practice, things that are helpful to the brain from a dietary perspective?

Dr. Greg: There are. There are a ton. So there's this interesting hypothesis for Parkinson's called the Braak hypothesis of looking at alpha-synuclein traveling on the vagus nerve from the gut. So potentially Parkinson's starts in the gut. So we are testing...you know, we address everyone's diet. Food is your best medicine. I mean, I am a naturopathic doc after all, and firm believer in that. And it does make a difference.

So you know, you need your oils, you need your good vegetables for vitamin minerals, you need adequate protein to get your amino acids. And then there's the energetic part of the meal too. So before I got into doing the embryonic-like stem cell procedure exosomes or mesenchymal stem cells when those were available a few years ago, that is the biggest lever that we really started to see the most change for folks. I was doing Chinese medicine, naturopathic medicine, diet, therapy, nutrition, we were having some benefit, but not as much as it's really accelerated with this extra therapeutics on top.

Katie: I'm with you, I always consider diet the foundation of anything else. And I've said before, you can't out-supplement a bad diet, you can't out-exercise a bad diet, they all have to work hand in hand. But that being said, are there any nutrients that we're seeing in the research that are especially supportive of the brain that are worth supplementing? I'm sure there's an individual aspect here as well, like I found, for myself at least, I have some choline-dependent genes and I don't tolerate eggs very well. So I do really well when I supplement choline. But are there any general recommendations that are brain supportive?

Dr. Greg: Yeah, so definitely omega-3 fatty acids is the hugest category. DHA is the one constituent for brain health. But they're anti-inflammatory, they're amazing for our phospholipid bilayer. New research coming out on plasmalogens which I did not really learn that in medical school. And Dr. Dan Goodenowe is coming out...he wrote a book called "Breaking Alzheimer's" and published at the Alzheimer's International Convention here this last year on increasing plasminogen levels in our blood and reversing Alzheimer's, basically.

So oils are very important. The omega-3 fatty acids, the 3-6-9 ratio, plasmalogens is a big player there. Level of cholesterol and iron in the blood also are amazing markers for brain health and can give some unique supplementation guidelines. I also look at the thyroid so sometimes supplementing with thyroid supporting foods because there are a lot of folks with the Parkinson's diagnosis with hypothyroidism.

So there's kind of unofficial link there but I'm seeing there are some cases on PubMed of reversal of Parkinson's disease with adequate thyroid medication. Dietarily, supplementation, you know, when I went to school...you know, it's like you think you have it all figured out then you realize, oh, no, there's a fractal universe here and there are so many levels to what we're doing. So the whole endocannabinoid system, sometimes it's, you know, a cannabidiol deficiency or ratio issue that is underlying the hormone imbalance. And there are more receptors for CBD in the brain than all of the other neurotransmitters put together. So that's another area that we look at, is looking at the CBD.

Of course, the mushrooms. I'm really excited for more psychedelic research to come out. I mean, that just makes total sense to me. Looking at neural networks and how mushrooms communicate on the planet and our brains are pretty much set up the same way. So lion's mane, there's a lot of research coming out on lion's mane. Chaga, these mushrooms, you know, ancient mushrooms that have been around, we've been using them in Chinese medicine for eons, and now they're coming out in the west, which is really exciting to see. The B vitamins, you know, B12, folic acid, they should always be taken together because sometimes you can mask a deficiency one way or the other with those.

Using, you know, the methylation process and looking at you know, what's going on with homocysteine in the blood. And that's the methyltransferase pathway. So if you're not methylating well or find yourself with some of the deficiencies and the SNiPs, that's an easy way of measuring what's going on in your body and in your blood. And then that would lead into, you know, carnitine supplementation, choline supplementation,

lecithin. So there are some simple dietary interventions that you can do to also help feed the brain. Magnesium is a great one, you know. So this is where you kind of get into the, what I call the American shotgun approach, right?

Everybody comes to me and says, "What can I take from my brain?" And it's like, well, here's all of the things and they're all well researched. But, you know, when you line them all up, and you're taking a gazillion supplements, it's like you're treading water and just trying to keep your head above water. Versus what I call the Zhang of the formula of direction, where you have an emperor, and generals and assistants, everybody to line up and move you like you're doing the freestyle. So that gives you some traction and movement to where you wanna go. And that's where the individualizing of the program comes in, through specific testing, making sure we meet people where they're at what's their genetic platform? And then what is the, you know, next best step for them in this moment.

Katie: That does seem to be the trend across all aspects of medicine, thankfully, is that personalization aspect. Although, I will say magnesium is a recurring recommendation...

Dr. Greg: Across the board.

Katie: With every expert, every condition I'm yet to have anyone say magnesium is harmful. So that seems like a good starting point for a lot of people. You also mentioned that omega 3, 6, and 9 ratio. So I've talked before about one of my theories about the rise in a lot of chronic conditions, is overuse of vegetable oils and polyunsaturated oils. And this seems like another one, I know it's a little bit controversial, but a recommendation I always give is that our bodies kind of developed throughout history without those specific fats, so we know we can exist without them. And so until we're more sure, it seems like a pretty safe thing to limit or avoid them.

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You also mentioned cholesterol. And I think this might be touching on a little bit of a controversial topic but I wanted to address it. And I may be off base and correct me if I'm wrong, but I've seen some evidence that reducing cholesterol too much can actually be harmful to the brain. And that may be in our fear of cholesterol-related to heart disease, we might be damaging the brain. Am I correct about that? And if so, how do we balance that?

Dr. Greg: Yeah, you are totally correct on that. We have gone overboard on manipulating cholesterol. And there is evidence arising, Cholesterol below 200 which is now the current recommended amount. When I started practice, it was 220. Well, what happened? We have the advent of statin medications that we can drop it down. But I think what we're doing is very short-sighted in that we're manipulating cholesterol artificially too low. And you look at what well does cholesterol do for us? It's the backbone of all of the sex steroid hormones in our body. It's integral for the integrity of our cell wall. We need good cholesterol, and it's gotta be on the fluid dynamics so trans fatty acids should not be in the diet. But we've gone too far.

And there's some evidence coming out on long-term statin medication, which is a cholesterol-lowering drug being implicated in early-onset dementias, and brain, memory issues, etc. So, you know, it has never made sense to me to give a mitochondrial toxin, just a statin medication in the mitochondria, or the energy factory of every cell of your body. And the heart in particular has the most mitochondria because it's pumping all the time. The brain has a lot of mitochondria too, by the way. And so we're toxing out the energy factories of the body to lower a cholesterol number that may or may not move the needle. I mean cardiovascular disease is still the number one killer in this country, with over 50 million people on statin medication. So we haven't really moved the bar in heart health with the advent of this drug.

So it's a little, you know, it is controversial because it's been driven by the propaganda to say lower is better, lower is better. But I'm not seeing that clinically. And I will tell you, you add plasmalogens into that mix and discussion of cholesterol because plasmalogens make about 20% to 25% of the cell wall or the phospholipid bilayer around the cell. Cholesterol is the other big major portion of that. And, you know, we might be on to

something of bringing back our health in eating better. I mean those ratios...I think you're spot on when you look at linoleic acid which is predominantly the acid that comes from those seed oils, those plant oils, the vegetable oil varieties, so they are not good for our health.

Katie: I'm really glad you brought up that mitochondria piece as well. I'm by no means an expert in this, but I've had a couple of guests on recently that focus on mitochondrial health and it's been kind of a research topic for me. And it seems like you mentioned there's a high concentration in the brain and the heart. So this is, considering that there's a rise in conditions related to both of those, maybe something we should look at. And one thing that one of those guests recommended was the importance of natural light for influencing mitochondrial function. And it made me wonder, is there a benefit to the brain as well? Especially as we are exposed to more and more artificial light and less and less outdoor light, is there anything we can do using natural light patterns to benefit the brain? I know, for instance, it helps circadian rhythm and deep sleep helps with those amyloid plaques like we talked about. But beyond that, is there a benefit to getting natural sunlight for brain health?

Dr. Greg: Oh, yeah. I mean, across the board, when you look at, you know, the physicians that kind of won a Nobel Prize in Medicine was all about circadian rhythm driving all hormonal balance in the body. So it does make a difference, like the amount of blue light that then suppresses melatonin, I mean, it just kind of...the ramifications of what we've done with light and our sleep cycles like, you know, the new smoking is lack of sleep. So you know, nobody would, listening to your podcast, think that it's fine for me to smoke a pack of cigarettes, like, it's not gonna have any effect on my health, right? But we all do it of like four to five hours of sleep, or, whatever with kids or, you don't get it, right, you don't get that level of sleep. But then the equivalent health impact is of smoking a pack of cigarettes a day, right? You just might not notice it, you don't have that smoker's hack in the morning but over the long term, it definitely catches you.

And so, you know, definitely in a brain health function, limiting blue light, using the blue blockers at nighttime, watching LED lights in your environment. I know kind of everybody has switched to that for the environmental component. But again, this concept of like, save the humans, like we're going down. The planet is gonna be here, we're the ones that are gonna disappear. So it's, you know, save the humans, like, okay, we definitely wanna be conscious of what resources we're using, etc., and in the grand scheme of it, are we doing more harm than good by now we're consuming more toxic medicines? I have no idea. But, you know, like, who's looking at that big picture as far as not just the bottom line of energy, you know, burnt by incandescent light bulb versus, you know, all of the other ramifications that happen from throwing our circadian rhythm off? So that's a big player.

Katie: I really like your line about save the humans. And actually, one of my favorite quotes from this podcast was with my son. I interviewed him when he wrote a cookbook, and I asked him a question about environmental factors. And he turned it around on me, he's like "Mom, you actually asked the wrong question because it's not that we need to save the planet. The planet is a self-correcting organism, and it will eventually save itself. It's asking the question of do we get to keep living here when it does that?"

And I thought that was a really good point. And to your point just now as well is the earth as a whole will self-correct. It's just going to be if it does it in a way that's cataclysmic to humans before we fix these problems. I think you're right, we need to find that balance of environmentalism and also taking care of humans because long term, those two things need to keep working together. But on the note of sleep, what are some things we can do from a brain perspective? How do we optimize our sleep? And maybe what are some things to pay attention to when it comes to sleep?

Dr. Greg: So I love tracking it. So I wear one of the Oura rings. But, you know, there's all of those devices out there now, the WHOOP, and you know, the Fitbit, and, you know, iWatch, all those things are tracking your deep sleep. So you wanna be tracking it because it does make a difference because whether you wake up...you know, I'll see folks and they're like, "Oh, I slept horribly." I was okay let's look at your data. It's like, well, actually, you've got adequate deep sleep, you're over 20% rem, over 7 hours of sleep and you weren't restless.

So, you know, it's like the story that we lay on top of the sleep which the data suggests like, no, it's actually we need a different story here. So it's getting adequate rest, so how do you do that? There's sleep hygiene practices on our devices. You know, it's f.lux is a blue screen blocker that goes as the sun sets. Now it does make your screen harder to read. But you look at that and maybe you need to turn it down, turn it off, right? It's time to get off the computer. Getting outside during the day, during the sunlight, during the early mornings really does make a difference.

Now, I live in Portland, Oregon and it's gray and dark pretty much nine months a year here. So that doesn't work. So it's like getting in front of some full-spectrum lights in the morning, right? Seasonal affective disorder is such a big thing up here because of that because we're not getting the full spectrum of light on our bodies. I think allowing the light to not always wear sunglasses, don't look into the light, don't stare at the sun. But, you know, get out in the sunlight so that that comes in. Because that's stimulating melatonin, melanin in the back of the eye there and on your skin, the melanin of your skin that's also then circulating and changing some hormonal balance in your body.

So sleep hygiene is then, you know, doing more gentle things at nighttime, like more conversation. Light walking is fine, but don't go to the gym because that's gonna spike your cortisol and possibly throw off your circadian rhythm. So it's getting into those health habits. Sometimes it's taking a bath, slowing down, being more contemplative at nighttime. These are all activities that we can do to help support us into optimal rest or, you know, getting a crown if you're a ring wearer or, you know, along those lines.

Katie: All great advice. And that morning light recommendation is another recurring one. And I love it because it doesn't cost anything. We see in the lab results it actually plays out and makes a big difference in your hormones as well. So it's one of those...you know, there's these amazing, like, VSELs and all these cool things

we can do. But there's also these free things like sleep integration and sunlight that we should start with. Love when that one comes up. And as we get close to the end of our time, I wanna make sure I respect your time. But you've offered to share a chapter of your book with us. So I would love for you to talk about the book. And I'll make sure that link is in the show notes.

Dr. Greg: So in there, I've got a copy of it here. It's called "Shake it Off: An Integrative Approach to Parkinson's Solutions." Now, it's not just about Parkinson's. Yes, it is Parkinson's on the cover, but this book, it does lay out my whole FAN-C approach. So F-A-N -C, my FAN-C approach to brain regeneration. And that's what we have people flying in from around the globe, to be treated in the clinics so much so that we're expanding out into Park City, Utah area as well.

In there I layout F stands for the functional approach that we're treating heart-centered dynamic beings moving through time and space.

A is the assessment. And this is often overlooked because people wanna go to the N, which is the nerve health, like, what can I take from my brain? Versus we need to assess and turn over some stones as to possibilities as to what are obstacles to your body healing itself. Three biggies like the triad that I see are heavy metals, the gut microbiome, and hormone imbalances. And so those three areas, those are the low-hanging fruit.

Now, of course, I talked about in here mold and lyme and other culprits that are also major players that could be mimicking some of the neurodegeneration and/or getting in the way of your brain healing.

Then I get into N so of the FAN-C approach. The N is the third letter, and that's nerve health. So that's all of the different nutrients. Now, it's not exhausted. I mean, I don't have peptides in this book, because those I really got into using afterwards. So we don't have the peptides in there, but there are a lot of peptides that you can take for nerve health. A lot of the nutrients that I mentioned during this show, actually it went above and beyond in the list. And then we get into the...oh, in that nerve health one of the other interesting things that was uncovered was I have a patent pending on a nasal spray called Clear Mind. And this is to really rid the body of brain fog. And so it's a potent neuro anti-inflammatory. Really puts the fire out, so to speak. And we're having really great results with that Clear Mind Nasal Spray.

And then -C is the cellular regeneration. And so I was using tissue allograft products and other stem cell products exosomes, those have pretty much been removed from the market in May of 2021 this year with a regulation from the FDA that turned them all into drug products. So there's a lot of different research that has to happen there. But we've got the VSEL, the laser-activated and guided very small embryonic-like procedure with hyperbaric oxygen and photobiomodulation, the PMF, and low-level laser therapies to all aid the body in its healing response. So that's the FAN-C approach that I lay out in the book.

I also have all exercises like Qigong exercises that I was given. I studied in Sichuan province in Tibet as a Chinese medicine student. And so it's the Jin Jing muscle tendon changing School of Qigong. So I do cloud hands, and I've got super brain yoga in the book, and I talk about diet, nutrition in there as well. So it's an easy read. I really made it to be consumed, to be able to read it for patients and their families. And really, it's a great way to look at even preventing, you know, if you've got folks with Alzheimer's dementia or you have concerns that developing, the layout and the framework in the book even though it's titled Parkinson's, it's still an applicable read for brain health in general.

Katie: Awesome. Well, those notes will be in the show notes as well as linked to your book so people can keep learning. And speaking of books, I'm curious if there is a book or a number of books, besides of course, your own that have had a profound impact on your life, and if so, what they are and why?

Dr. Greg: You know, the earliest book that I think had the biggest impact on my life was Ram Dass's "Be Here Now." I found that book I think as a sophomore in high school, and it was my introduction to another world, I guess, of possibilities. And in there, in the back of his book, I think I read every book in the resources department in the back of that book. So it led me down, kind of through all of the spiritual transitions. It led me to Thich Nhat Hanh and "Peace Is Every Step."

And I really...you know, Buddhist thought and religious thought from around the world, and just around the concept of being in the now. And, you know, it led me to Elizabeth Kubler-Ross "On Death and Dying." I mean, it was just basically instrumental of like, my curriculum of why I came to the planet. And I found that in early high school. So I'm so grateful to have found him as a teacher, and I got to study with him a while he was on the planet. And it led to so many other things for me. So, you know, as far as earliest influential book that I remember, that's the one.

Katie: I love it. I will link to that as well. And then lastly, I'm curious, this can be on a personal level, or it could be medically related. Any just top pieces of advice, or the kind of the 80/20 of things you find most important in your own life for maintaining health?

Dr. Greg: You know, I think there's a lot of looking outside of ourselves for the answer. And as I age, you know, you look at all of these kind of the sage advice is go within, the answers lie within. And that never really made any sense to me until, you know, the last few years and I'm like, holy cow, this is what they're talking about. Like, getting quiet, still, meditating, really developing a practice for yourself, that you are intelligence. My understanding of the universe is really leading towards oneness.

And if this whole thing is one entity, and we're all just kind of separate but the same kind of manifestations of each other, we're just, you know, there should, number one, a lot more love should come out of that concept.

And number two, it's really getting quiet enough so that you can actually listen to your internal barometer of not emotional or not reactionary, but really, that still voice that's in all of us. And entrusting your intuitive sense because you will be guided.

I mean, that's my job as a doctor, physician, is I listen intently. I like to say I do a lot of nothing all day. It's the body, and it's the intelligence, and the medicines that really are doing all the work. I'm holding space. I can be a good guide and cheerleader, but ultimately, that's what we need to be doing for ourselves, is just getting quiet and listen. And if you start asking those questions of yourself, of your highest self, for the greatest good, maybe out of that curiosity, you may be surprised at where you're led and what answers you get.

Katie: I think that's a perfect place to wrap up. And I love that advice. I'm so appreciative of your time today. This has been such a fun deep dive into brain health and health in general, and I'm just very appreciative. Thank you for being here.

Dr. Greg: Oh, thank you so much, Katie.

Katie: And thanks, as always, to all of you for listening and sharing your most valuable resources, your time, your energy, and your attention with us today. We're both so grateful that you did. And I hope that you will join me again on the next episode of "The Wellness Mama Podcast."

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