Dr. Love on Fraud, Failure, and Hope: The Untold Story of Alzheimer's Research Transcript

(Transcripts are generated by AI and may contain errors)

Introduction to the book review

If we find the magic pill, we'll be able to cure or treat Alzheimer's so that you don't have to worry about it. And that isn't the truth. That isn' what we're finding.

Welcome back to the Think Well, Age Well podcast. I'm your host, Dr. Heather Sandison, and I am delighted to be chatting again with my dear friend, Doctor Robert Love.

So today we're going to dive into a little book review. Now don't worry, this is not work. You don' have to go out and read the book, although we both found it fascinating.

To be honest, we are both Alzheimer's nerds, so I think that's why each of us read it like I read over a weekend and couldn't put it down. The book is called Doctored by Charles Piller.

How fast did you read it? It was a thrilling book. I started on a Saturday night and then I read all day Sunday and I was done by Sunday evening. So we're in a 24 hour period.

Yeah. It is fascinating. What were your big takeaways? I love this book as someone asked me recently for a book recommendation. They want to get into the Alzheimer's research.

This is just a great place to start because it's so interesting. so this is like a murder mystery of Alzheimer's research. If you're wondering where your taxpayer dollars have been going, if you are wondering why we don't have a quote cure for Alzheimer, you have the answers in this book.

People have lying to you, they've been lying us, to research and science. It's really upsetting and I want you to know about it because it's what's true and factual and the truth matters.

Unfortunately, people not in our line of work, but researchers in the field have been lying to people for their own personal gain. So I'm going to give you a quick highlight of the book.

I highly recommend you read it. It's written for the lay person. Written by a great writer, Charles Piller, and it's super exciting. Basically, what he discovered with the help of Dr.

Perry, who we interviewed recently, the head of Alzheimer's disease, as well as another neuroscientist, Dr Schrag, is that One of the main hypotheses in Alzheimer's disease is the amyloid beta hypothesis, or the amblyoid plaque hypothesis which basically says amylid plaque causes Alzheimer disease.

And the result of people believing that theory is that tons of pharmaceutical money and tons research has gone into trying to stop amlyloids plaque from developing and therefore quote cure or reverse Alzheimer' disease Or get rid of amyloid plaque that's already there, right?

So this is NIH-funded grants for many, many years. You know, the adage was, if you weren't studying amlyloids, you were studying Alzheimer's. So we double down on this hypothesis that amylide was the problem.

When in fact, what we've seen over and over again throughout the years is that when we target amyloids specifically, we do not get better outcomes for cognition.

And yet, in spite of that, there's been this marketing effort to promote the amyoid hypothesis over, and oh, let's tweak it a little bit, or let look for oligomers, earlier stage disease and target it then.

And yet, over and over again, what we see is that we don't get the outcomes that matter to patients, improvements in cognition. Really bad science, they'll say, hey, if we just block amyloid plaque, that'll prevent Alzheimer's disease.

So they do that and the patients get worse. And they say hmm, maybe we needed to target a different type of amyloid plaque. Then they did that, and then patients got worse, then they try it again in a difference population, terrible side effects like brain bleeding or just awful things.

They keep on tweaking the data. or they keep on tweaking the theory, either the data show, this doesn't work. And then Dr. Dale Bredesen, who's my personal hero, someone you've gotten to work with very closely, Dr Bledesen was brave enough to say, hey, I don't believe this amyloid plaque theory.

I think it's actually the brain's defense system to insults the the. brain I'm going to try something different. i'm gonna try not using the amylid black theory but instead engage in healthy behaviors and find out what that.

and of course, the answer to that is he was heavily criticized because the, answer that was not a pharmaceutical. The pharmaceutical company saw the amyloid plaque hypothesis and said, oh, we can make money by targeting amyloid plaque.

We get this. Let's do that. And it didn't work. Dr. Breslin said let's get people dieting and exercising and sleeping well and reducing their stress and being outside in the sun and spending more time with loved ones and, you know, learning dancing and reading books and so forth.

Of course, these things mostly are free and there's all people got better and he was attacked. So the free thing that works, this is basically what happened.

There's a free think that worked. that's shown over and over again, the science to work, you've replicated this and you helped reverse memory loss in people by doing mostly free things.

Dr. Bredesen has done it as well. Well, to be clear, we budgeted $25,000 per participant in our clinical trial that we did over six months.

Amyloid hypothesis and research fraud

The most that was spent for any one individual was $19, 000. Now that included all of the visits with the doctor, all the labs, IVs, supplements, medications, everything that we did.

Now, to your point, the foundations of Dr. Bredesen's protocol are lifestyle. They're the choices that make every day about what we choose to eat, what time we go to bed, how much movement we get each day.

Those are the choice that have a big, big impact on our lives. Supplements do cost money. Testing to make the protocol more precision-based, more individualized, those do costs money, talking to a doctor about how to implement these things and what to prioritize, that does require some resource.

So it's not entirely free, but it can be implemented at very low cost, particularly if you are in the prevention stage. Absolutely. And then your book, Reversing All His Arms, New York Times bestselling book.

You can get this and work with a coach or work someone who understands this, and implement this yourself for almost nothing. So the things that are really inexpensive that work.

are attacked by the media, which is mostly sponsored by pharmaceutical companies. If you don't believe me, just watch the news, see where the ads are coming from.

The ads coming, from pharmaceutical company. Therefore the, media is sponsored, by big pharma as of right now. We're one of only two countries that allow big Pharma to pay for advertising.

It's us in New Zealand, every other country pharma can advertise to you, Which is probably the correct thing to do. Anyway, so the things that work are attack by Big Pharmer.

And of course, big farmer likes the thing that are drugs only. And this shows, this book shows in detail how researchers faked their data to get famous and get grants with your money and used your might to perpetuate the amyloid beta hypothesis, which wasn't working in humans.

And then how big pharma then took that data and developed drugs to target amyloid beta and those drugs didn't work. Then they fudge their day. That was the most outrageous thing to me.

that was so upsetting to. Highly manipulated. I try not to get too upset, but I am allowing myself to be upset when your health is put at danger because you had a pharma company that tried their drug.

It didn't work. And then they took out the people who basically took the drug and didn' t get better, and they threw them out of the study. They just deleted their data that didn t agree with them.

I can show you anything shows a benefit if you allow me to throw out certain parts of the data, which is what they did. It's extremely unethical, it's terrible science, fraudulent, wrong, criminal, and then they tried to get people to keep taking the drug based upon the fraudulence science.

Basically, scientists at the University of Minnesota faked their data to support the amyloid beta hypothesis. They kept getting grant money. pharmaceutical companies would pay money to have their fraudulent science published by certain journals, they pay them a consulting fee.

They say, hey, journal, take a $10,000 consulting and here's our most recent paper. And they say oh, that's approved without reviewing it. Then they go to the public and say hey we published a new paper showing our drug is great and then their stock goes up.

That's actually what happened. People's lives are put in danger. Do you remember the story around cassava science is really one that stands out to me.

This was really heartbreaking because it chronicles the life of someone who was in a phase three clinical trial. So human research was happening with a product that where the real primary research this product was based on had never been replicated outside of the one lab in New York where there was a scientist, I guess you could call him that, who was doing this work to support that you can use this intervention.

And yet it had never been replicated anywhere else, and there were other scientists who were raising their eyebrows, kind of going, this doesn't fully make sense that can resuscitate zombie cells, zombie neurons.

Why would you be able to do that? And particularly in this way. I read that I thought that was strange. Really, that's how you're going to treat Alzheimer's is by bringing back senescent cells?

I said, mmm, And these were cells that had been like in a freezer for a long time that he was claiming that you could bring them back. And so it's like, you kind of scratch your head like this doesn't, there's no common sense here.

and yet this stock, the stock of this company, because they would publish something, they got through these different phases of the trials, They had spent tons of money and the Stock price was going up.

So people were getting rich. It became like a meme stock. And they published their data in journals where they were paying the journal a consulting fee.

So the editor of the Journal, they're paying them tens of thousands of dollars, and then they are handing them research, then publishing their pseudoscience benefits.

I didn't recall that that was… Yes, there were certain journals that they would publish very quickly and they working with them as a consultant. It's legal to hire the Editor of a Journal as consultant, it's really, really unethical for them to then just accept any paper the pharma company hands to them.

But that's basically what happened. And this led to phase three. Or that happened with other companies. That was happening in the book. Clinical trials.

I don't recall that it was that particular Cassava Sciences that was doing it, but the fact that they were able to get to a phase 3 clinical trials based on fraudulent data is scary.

Terrifying. Now, that being said, we need science. We need solutions to this problem. We don't want to throw the baby out with the bathwater and say, OK, science is bad.

We shouldn't fund it. It should really be about how do we create systems in society that value honesty and truth and that don t incentivize fraudulent data.

One of the things we were chatting with George Perry this week, the editor-in-chief at the Journal of Alzheimer's Disease, and one of my big takeaways from our conversation was how valuable it is to replicate science, right?

That really what we're trying to do is disprove our hypothesis. to see if there's any alternative explanation. And unfortunately, with the amyloid hypothesis, that isn't what's happened.

People have doubled down for financial reasons, for the sake of their careers. They have double down on a hypothesis that doesn't stand up. That's right.

A lot of the scientists have spent their career on amyoid plaque. keep on trying to prove that that's the thing rather than say, Joe, it hasn't proved out yet.

Let me research something else, which is frankly not very good science. A good scientist should be skeptical of past findings rather that they should open to new data rather then say no, I still think it's amyloid beta.

Yeah, we should be zooming out and seeing what would be a more inclusive way inquiry around what's going to support neuronal health and prevent people from going down the path of Alzheimer's.

And Dr. George Perry is one of the heroes in this book. He's so great because he's doing the investigation with George Piller and Professor and Dr Schrag saying, hey, what else is fake science?

What else is fake data that's affected people? And let's get to the bottom of this. So he was fantastic. He talked about replication. Dr. Sanderson, in our field of Alzheimer's prevention and reversing Alzheimer disease, what data is replicable, what has been replicated both in the primary research as well as in humans?

What can people really trust that's shown the test of time and is backed by multiple labs repeating, replicating the same data? So what do people know is true in our field of Alzheimer's prevention?

When I'm thinking through this, how do I know what's true with a capital T? How can I feel certainty about what is truth? First, it has to make sense.

It has make to sense to me. And so when I think about the human body and the people that I look at who are aging, who're aging well, are healthy and vital, what are the things that they have in common?

They exercise, they eat well. They have great relationships. They're involved in community. they prioritize their sleep and stress management. These are lifestyle-based things.

They might take some supplements and they have different passions and interests, but generally speaking, people who check all of those boxes are aging well.

And then let's go to the science to confirm that. Is that true or is that just correlative? Is this just a random thing that we're picking up that might not actually bear out when we look at this in a systematic scientific way?

But what we see is when look to science, sure enough, exercise, diet, Meditation, stress resilience, not being in isolation, but actually being a community, all of these things are associated with reducing our risk.

And in fact, many times we see improving cognitive function. So we say these both when they are stacked, like in the trial that we did, Dr. Bredesen did and Dean Ornish did.

We've seen these lifestyle research papers coming out. Now they are newer, right? To be fair, this is newer. The first trial that was done, prospective trial was, Cat Choup's led that article.

It was published in 2022. Mine was in 2023. And then the Ornish paper was publish in 2024. These are relatively small trials, but they're generally replicating each other.

This is in humans. Taking humans changing their lifestyle, some of them involve supplements, and these people are reversing memory loss of different stages.

And it's being replicated in multiple clinical trials. That's correct. And what we see is that independent of that, like when you aren't stacking them, so these are the stack trials where you take multiple lifestyle interventions, nutrients, different precision-based medicine, but then Dean Ornish's was less of more about the support group.

But essentially they're stacked lifestyle intervention. When we do that we say statistically significant improvements in cognition. Now outside of people who I don't know, who have never met, I'm not even aware of, But throughout the world, what we see over and over again is that exercise has a big impact.

When you look at exercise alone, it has big impacts. When you look at diets alone, it has the impact of improved cognition. We see this in the keto research, which is why we added it to our stack trial.

So from my perspective, common sense would say, okay, if we know that independently, all of these lifestyle interventions support cognitive function, and we see improvements in some cases, what happens when we put all them together?

Can we even see more improvement? Exactly. A really simple analogy that I think is helpful is weight loss. So what helps with weight-loss? Well, number one, does dieting help?

Yes. Oftentimes, a good diet can help people lose weight and keep it off. Just exercise help. Exercise certainly helps keep the weight off and it can be involved in a successful program.

What happens if you do those two together? Even better. Even more better? Now, what if do you exercise, weight lose, and you join a club of people who are trying to lose weigh?

Community support, even better! What if your spouse helps you? And your spouse is like, even better, right? What happens if you move to a community of super healthy people?

So if move from a Community of obese people in Alabama to Boulder, Colorado, which is one of the healthiest communities in the world, does that help? Probably.

Right. So what if stack all these things, Which is what you've done in your trial, with Dr. Breslin. They took a bunch of things shown in The Science to help individually and you put them all together.

And the response, the result of that is.

Lifestyle-based prevention and replication

reversing memory loss associated with cognitive decline, or in short, basically reverses Alzheimer's disease or reversed memory losses, which is absolutely fantastic.

So I love the replication of this data and how powerful it is, how simple it, is exercise is great for the brain, diet is good for brain. Do them both together even better.

And we can come back to, I always use the analogy, right? We've got these plants behind us, we have houseplants. And if my houseplant were dying, would I look at it and go, oh, it must have misfolded proteins we need to get out.

I wouldn't look a dying organism and think that I need take out the beta amyloid from it. I would think it needs water, or maybe it's getting too much water.

Maybe it need nutrients, maybe needs more sun or less sun. We would thing about a complex system and what are all of the components that are necessary for the health of that system.

Not, let's take out this protein. And if I may, if maybe a little controversial and a aggressive here, media has been very harmful in this way. Because my father, who's very intelligent, he's still practicing law, his dad had Alzheimer's disease.

And so my Father is very cognitive about knocking it in himself. He'll send me articles, the headline is, they finally found the thing that causes Alzheimer.

Or new discovery shows the root cause of Alzheimer, and I'm usually pretty skeptical. That's some random, really specific thing that I'm thinking, I don't think that's the thing.

I Don't that specific protein. That specific food additive, virus, right? It'll be a virus or a food additive. It will be MSG. Like sure, that can be risk factor, but that is the think.

And then people click on this. This is click bait. My dad's saying this to me. Robert, you should incorporate this into your work and into you clinic.

Great dad, we're already advising people not to eat MSg. But media will put that out there and keep on having people think there's one cause, right? And pharma wants you to believe that because they want to find the solution to that cause.

Whereas we know it's multiple causes, just like obesity, there are multiple cause why is someone obese? Diet, yes, but also their sleep's probably bad.

They don't exercise, they might have a job they don' like. There might be divorce and be super stressed. It might lonely. Combine all these things together and they may have toxins in their food, air and water which inhibit their metabolism.

Any one of those could be enough, So media has been harmful. And then the most recent New York Times article, which I love because it's so bad, basically says lifestyle doesn't work.

It says it doesn' work for everybody, Which is true, but really it works for seven out of 10 people. So a truthful headline would be lifestyle to prevent Alzheimer's disease works in seven of ten people, instead they say it does not work everybody and it is expensive.

Try having Alzheimer, that's expensive, right? A nursing home, 10, 15 grand a month, That's Expensive. Um, and so media have been really, unhelpful. They've been counterproductive with disinformation.

Misinformation is, you know, I tell you the pizza joint is down the street to the right. It's actually to left. I try to give you good directions. Disinformation's telling you wrong thing, right?

The pizza is over that way when I know it's not that. That's what media's been doing. Wrong information on purpose to confuse you and a confused person by default defaults their medical doctor who's trained and incentivized to prescribe drugs.

trying to look for a drug for Alzheimer's. There's no drug, as of yet, that's been super duper helpful, though there is an interesting one that has been pretty helpful in our clinic that is getting great results.

But the real solution is what you've done in your clinic, which is exercise, diet, sleep, supplements. It's relatively inexpensive, it's proven the science, and media doesn't want to tell you that because they're big pharma sponsors.

Don't get paid if you exercise. So I just have to share that my perspective is a little different. I can't sleep at night if I think that there are evil villains out there really attempting to confuse people.

I have to think people are decent and people good generally, but that it is confusing, that is really confusing. And we all want that one magic pill. That would be so nice.

The GLP-1s, they're part of that story these days. I would love to be able to tell everyone about the magic pill. And I think that's the narrative, right?

Like antibiotics, like insulin, if we find the magical pill, we'll be to cure or treat Alzheimer's so that you don't have to worry about it. That isn't the truth.

that isn' what we're finding. What we need is a multifactorial approach that addresses all of the potential things that could go wrong and be out of balance.

and that that is where we are seeing the best results is when we address all these factors that can contribute support brain health, and that beta amyloid and tau proteins that have been made the evil villain, that they are actually there to protect you.

They are actual part of the response, not the cause. Can you explain that? And then I want to share a joke my mother sent me that's really… Oh, but I need to hear the joke.

Then I'll tell this. Okay. So my mother will often send me comics on my phone. This is a great one. That's a love language. Sending messages of humor.

The new funny messages, yes. My mother's great. And so she sent me a message. Persons at the doctor's office and they're looking at their results and sitting across the table from a couple.

Sir, it looks like your poor health, your disease is due to poor lifestyle. And the patient says, oh, well, do I need to change my lifestyle? The doctor says oh no, we have a drug for that.

GLP-1s. Which is kind of what medicine is. Most people are sick because of lifestyle. Right now, which is a unique term in history in medicine, most diseases are chronic diseases and most of those diseases aren't preventable.

most those are due to lifestyle, bad lifestyle is what's causing most them. Compared to 100 years ago, those people were dying from viruses and bacteria or problems in their food or clean water.

Now it's obesity and chronic disease, heart disease and so forth. So people are going in their doctor with lifestyle problems and the doctor says, oh, here's your pill, rather than have you heard about lifestyle intervention that you can do for pennies on the dollar?

Not only will this prevent your heart disease and help reverse your disease, but you'll also be younger and healthier and sleep better and you have better sex and your life will improve in all kinds of different ways.

Instead, they just offer the pill. So I'd love that joke that my mother sent because it's funny and very, very true. So,

can you explain to people how amyloid plaque is not the devil in Alzheimer's disease?

It's not to cause, but is rather, it has benefits and it's protective. It is a symptom rather than a cause. Can you help people understand that? Yeah.

So this came up in our conversation with George Perry this week is that beta amlyloids helps to process metals. That helps us to protect us from metals, that helps protect from oxidative stress in the brain.

And also, there's other people who have researched how beta-amyloid is antimicrobial, helps to protect us from herpes viruses and spirochetes and other things that can get into the brain.

So when we're producing beta amyloids, it's kind of like a cytokine that we would think of in the periphery. A lot of people heard about cytakines and cytocine storms after COVID.

And these cytokines are there to protect us. It's part of an inflammatory mechanism. So we mount a response. And hopefully what happens is when we Mount that response, we resolve the issue, right?

We get rid of the infection. We Get rid off the toxin, whatever it is that's triggered this inflammatory response But if that insult, that infection or that metal or the other toxin is chronic, then we don't actually resolve it.

We just have more and more protective mechanism or cytokines or amyloid or tau that is accumulating over time. So what we want to do where I think the really interesting clinical question is, is what caused the amyloid, what cause the tau, and what causes the inflammation.

When we play there for those individuals, when we identify what was the smoking gun, or what pulled that inflammatory trigger and won't let off, that is when you can see real results.

So what caused the amyloid is really a big question. And then the new question that Big Pharma is trying to answer is, is tau tangles, but they're not asking the right question, they are not ask what's causing the tau-tangles.

They're saying, how do we stop the spread of tau tangle by blocking certain enzymatic responses and certain biochemical processes, which is how Big pharma thinks.

What drug can we give them to stop this thing rather than how can what's causing it. And I know you and I share a reverence for the body, for that brilliance, the divine design that is in our body.

I think, again, when it comes to tau, I'm fascinated. When it come to beta amyloid, this is part of the story. But it's there for a reason. It's the body's natural response to something.

And so if we take away tau, what we'll probably see is a decline in function, just like what you've seen with when we takeaway beta-amyloid. We've gotten very good at taking away beta amyloids, of getting it out of the brain.

But when you take it away, we actually have an increase in risk, and we don't see improvements in cognitive function. I love what she said. Big Pharma is great at stopping and blocking amyloid beta.

They're terrific at it. Yeah. They have that dial. They're awful at stopping Alzheimer's. Right. And they are terrible at that. Your average physical therapist, your average personal trainer is better at stoping Alzheimer than Big Pharma.

But they're great at a stopping amyloid plaque. That's so interesting because they did great doing that, but they were not great stopping an Alzheimer disease.

So they asked the wrong question. The right question is, what's causing this? And what are the benefits? It's so fascinating. These things, instead of being evil villains, they're actually there to protect us.

So how is that working? And maybe there's even something in… I'm not anti-pharmaceuticals. I love

pharmaceuticals that help us, I prescribe them in my clinical practice all the time when appropriate.

But we want a wider tool belt. We want more than that to play with. And the pharmaceutical needs to be helpful. That's right. But a pharmaceutical that maybe uses the wisdom of why tau is being produced or why amyloid is been produced, like maybe there's a treasure trove in there of something that could actually benefit us.

Because I believe, because of the science, these are being created in response to something and that there is wisdom in that. I love what you said about our reverence for the body and the biology.

I personally believe there's something greater than us. And I don't want to say I believe in a creator God, but I do believe that there is something bigger than that that created us and helped design our bodies through the process of evolution that is amazing.

So I engage in prayer and I think prayer is really powerful. The science supports that. Amazingly, science shows the benefit of prayer. Science even shows benefits of saying grace.

Just pausing and saying, grace actually improves digestion. Should we all do it? Should pause and say grace? Sure. Not even because we're eating, but just because, why not?

Do you want to leave us in grace? No, please. If you're any food or eating any foods today, thank you for this food we are about to eat. Thank you all that took the brain here, the plants, animals, sunshine, rain.

Please help this to nourish our minds, bodies and spirits. And thank for the blessings of our lives, our health and our loved ones. I love it. So when you said saying grace, I thought literally you meant to say grace.

Oh, no. But I think you could do both, right? You could just say Grace. A moment of mindfulness. I'm going to start saying Grace I love saying grace. And so on that track, the idea of the divinity of body, right?

A lot of religions talk about the body as a temple. So if you just believe in evolution, we've been human beings for maybe 100,000 years or less, prior to that, millions of years of evolution to get to here.

Our machinery, our biology is amazing, and it's so fascinating and so complex. There's much we don't understand about our biological, biology's amazing.

And then the COVID vaccine came out and I started hearing things that I really, really didn't believe. By the way, I'm not to quote an anti-vaxxer. I am skeptical of science doesn't sound right.

And so I start hearing, although if you heard this, people were saying the vaccine is more beneficial than natural immunity. I said, that's going to require a ton of data to show me that because my biology has been around for millions of years.

As a human, I've been here a hundred thousand years, my immune system's awesome. Natural immunity from having the disease naturally, My immunity's got to be better than whatever was developed in a lab over six months.

It's gotta be. There's no way it's even close. And if you ask any high school biology student or teacher, they'll say, of course, but that's not what we heard on the media.

And that made me extremely suspicious. So the COVID vaccine, I'm glad my parents got it. I think that was the right thing. They were in the original risk group and it was shown to be beneficial for that group.

At least that what the data shows right now. Don't know what a deeper dive is going to show. Wasn't likely to die. So I didn't get it. But when I heard things that just made no sense to me, like, we're talking about the zombie cells coming back to life, that it just doesn't make sense.

The idea that a vaccine is, of any vaccine, is better than natural immunity. Doesn't makes sense, right? That's not

the way our biology works. I want you, the listener, to keep your eyes out and your ears out for things.

Red light therapy for brain health

That just don't. Make sense if you've, if, for example, hear new solution to Alzheimer's found, it turns out it's this magical pill we found at the bottom of the sea.

Prevagen, something from, um, jellyfish. They're like, hey, we found the jelly fish is the solution to Alzheimer's. Yeah, it's an interesting mechanism.

It's quite unique. it pulls calcium. And we see that with aging that it holds calcium out of the neurons. The proposed mechanism here is that we accumulate calcium in the neuron as we age, which is true.

That happens. We're going to hit an action potential faster when we have excess calcium And so, Prevagen basically is the only thing that pulls calcium out of the neurons.

Now, I've used Prevagin in my clinical practice for years, and for a couple people, it's been helpful. Not most of them. Also, a close friend of mine looked at using AI looked through all of the Amazon, all the reviews basically of supplements that help support brain and healthy cognition.

And interestingly, it's almost like a clinical trial because you're getting these long reviews from people and people will come back six months later and update their reviews.

And you have huge amounts of data, and people will mention certain things. And Prevagen was not actually that effective. Lion's Mane was effective, Omega-3s were effective…

Yeah, there were all these things where people were emphatically reporting that they were getting cognitive benefits. Preveagen did not, was one of them.

So have your skepticism up if you see any articles, anybody saying they found the cause where they have the drug, very unlikely, right? Have your scepticism and require extra proof.

If you're going to tell me something that doesn't make logical sense to me based upon my understanding of biology, you got to have a ton of data to reverse back.

So by the way, if show me lines made as not helpful for memory, I'm willing to change my position on that, but you've got to have some really, really good data, and it's got be replicated.

And they'll say, okay, I am a scientist. I will change perspective on something based upon the new science. That's what being a scientists is. But you got have really data.

So keep your skepticism up when you see really click-baity stuff in our field about Alzheimer's prevention, Alzheimer reversal, because it may not be absolutely true.

There is something that's really hot. Little pun there. There's something hot in our science. Red light therapy. I'm sure a lot of people have been watching about red light.

Therapy benefits for anti-aging, reducing inflammation, improving skin health. All kinds of benefits of red light. Um, and Dr. Sanderson, I want to ask you about this because you've used this in your clinic.

You've seen this. In person, uh, help you, can you help people understand a little bit more about red, like why this is benefit and then why is it beneficial?

Specifically the red like hats, how on earth can point a hat on my head that has red? Like, How can that be beneficial to the brain? Yeah, so my experience of red light started back when I was in training at Bastyr 12, 13

years ago.

Gosh, 15 years go, getting old. You're staying young. That's right. I'm enjoying it. And I actually am not afraid of getting older. So what happened was I had a patient who had deputrons.

This is a contracture in the hand. We had these lasers back then, red-light lasers, low-level light therapy. And these lasers were like 10, 15, $20,000. They were super expensive, really hard to get.

And this guy would get on the bus, and he would come three days a week to have the laser put on his hand. It was like 15-20 minutes that we would do it in.

He would take all of this time to come get this laser. I was, like, dude, this seems like a lot of effort. to come and get the laser. He's like, yeah, but it works.

If I skip it for a couple of weeks, my hand gets worse. And when I come consistently, it gets better. But I can't afford to spend 10, $20,000 on this laser." So I was really intrigued at that point.

I didn't connect the dots between red light therapy and cognitive function until much later. As you mentioned, skepticism, I'm a skeptic, years ago, maybe 10 years, ago at a conference and he was describing red light therapy for mitochondrial health and for cognition.

And he had at that point a little nose clip that was shining redlight through the cribriform plate into the brain. And he was talking about all of the benefits.

And of course, when somebody is saying, oh, this helps everything, you're even more skeptical. But it turns out that because red light therapy primarily is working, we think, in mitochondria, what we see is that the cells are able to produce more energy.

Lo and behold, that really does help everything. So it's used aesthetically, as you mentioned. I think we put it on our face, and you can see that people, after 30 days or so, they look younger because there's less fine lines and wrinkles.

And we also see that cognitively people improve. So the most profound impacts are on people who have the more severe cognitive issues. We had living at Marama early on.

And Maroma is your center where you're reversing memory loss. It's like the reverse of a nursing home, right? People go to a Instead of memory care, our goal is memory recovery.

And that's what you're seeing. People come to your clinic, get better, then they leave. Well, yeah, and not always 100% better. But we see improvements and stabilization very regularly.

people improve their memory loss, And then, they go back home and spend their life with loved ones living a higher quality of life and going to a nursing home to decline at $15,000 a month or $10,00 a That's always the goal.

And so this particular resident, she had a Lewy body dementia and she was very paranoid, had hallucinations, and interestingly she would wake up in the morning some days on her worst days and should be speaking like a toddler.

It was really kind of a bizarre behavior and we would put the red light on here and within 20 minutes she is back to speaking in a normal voice. Now she wasn't 100% cured, but in 20 minute we saw her anxiety drop, and she was able to converse with people in a way that she could tell them what was bothering her and get the benefits.

Was this specific red light hat? This was the V-Lite. Yeah, this is the v-light. We use the NeuroDuo, which is a product that has both alpha and gamma.

So gamma is used routinely for memory, and at Mirama we use this six days a week for 20 minutes on our residents who live there, that's what we suggest for people at home.

And then alpha is great because it specifically helps with anxiety. And now we were using gamma for her, and we saw this benefit. We saw the benefit even in gamma, not just alpha.

But on my staff, we can put if they're having a particularly anxious day, everyone try it at Marama and at Solseri. You can see that people just like they haven't been that relaxed in a while after doing 20 minutes of the alpha setting.

So, we see that it definitely helps people with severe cognitive impairment. We see it within 20 minutes, sometimes, not always. But what's exciting is that people who have mild cognitive impairments, earlier stages, the data shows that there's cognitive improvement.

They do better on a multitude of cognitive testing. Mood improves, sleep improves. Energy improves – circadian rhythm, of course, because it's red light, which is approximating you know, morning, sunlight, sunrise, sunset, that red and orange spectrum, this can improve circadian rhythm and melatonin production, but also reduces inflammation.

So a lot of this research came out of Harvard. There's a gentleman, the godfather of red light therapy is Hamblin, Michael Hambin, and he was at Harvard for a long time.

And Dr. Lu Lim, him and his group at V. Light, have also published studies with their particular device. And these, the wavelengths are in the mid-600s and the middle-800s, and they specifically target the cytochrome C oxygenase or have an impact on cytonchromes C-oxygenase, which helps mitochondria produce more ATP more efficiently.

So for our scientific skeptics out there, I hope that's most of you, has this been replicated in multiple studies? Has red light just on the skin shown to improve mitochondrial function?

As that has been shown in several research centers by multiple scientists? And has the benefits of red-light therapy in a hat, as that been reported as well?

Yeah, you'll see that there's multiple businesses popping up out there. Dr. Lu Lim at V-Lite is the one who I've known the longest and who have a ton of respect for him.

He's very high integrity. We've had a long-term relationship. And I have just been really excited about the science that keeps coming out. Yes, it is replicable.

We see this, the science started in Russia and Eastern Europe. So they're using, they've been using the red light therapy for a long time. In fact, there was this really interesting Russian study that took post-stroke victims and they inserted through the femoral artery, They inserted a redlight and were shining it in the…

Oh my gosh. Yeah, into the brain. From their leg. Like sticking something up into their brain? Yes. That shining light, oh my gosh. Shining red light.

And they saw that the stroke victims who they did that for, they only did it once, right after the strokes. Six and twelve months later, those stroke victim had better outcomes than those who did not get the red lights shining in their brain.

So it's definitely doing something, and not just in that moment, but there's actually benefit even after their redlight exposure. Boy, if you were a scientist in Russia and you faked your studies and then they spent a bunch of taxpayer dollars in a Russia on your fraudulent science, can you imagine what would happen to that scientist?

I bet that scientists would be hunted down and taken to the gulag and interrogated by Putin. How dare you waste our community resources? Did you see that movie?

That I don't watch very many movies, but did you that one about the doping, the biker? No. Oh, somebody's got to put it in the comments. What's the name of the movie?

It's so good. It is mind-blowing talking about Russian data. You don't want to waste the resources of Russia because they will come after you. So I imagine their scientists might be a little bit terrified of lying to their equivalent of NIH.

I wonder what's going to happen to these fake scientists? I want if they're actually going get in trouble. Um, I recently saw something that the state of Texas is now investigating Mars, the company Mars.

and make skills in M&Ms for knowingly putting toxic food additives in their food that they don't use in Europe. So for the last decade, Mars has been adding chemicals to the Skittles to make them more colorful.

For example, red 40, yellow number five, that don t use it in And they knew they were bad for you. And Texas has opened up an investigation saying, hey, Mars, you knew this was bad Texas residents.

Why did you do this? If they only sell them that way in Texas? No, they sell across the United States, but Texas as a state is going after them. Now, the federal government may go after him as well.

But that's a fascinating idea. It's like, Hey, we've been poisoning our people. We're actually going to hold you accountable. That's actually not OK to do as company, which is really great responsibility and accountability.

That's fascinating because all of Galveston is like super toxic, right? DuPont and all the chemical. I wonder if they're going to go after them. Texas might not be as business friendly anymore.

Oh, this is really interesting. There's a, I went to the University of Texas for grad school. And when I was there, we went, there's, a city that makes Dr.

Pepper, but they make Dr Pepper with cane sugar. They make it there, and it tastes really, really good. I was there with some friends, I said, oh, you've got to get Dr.

Pepper here, it's so good, And I did, It tastes amazing. And the research shows that that city has less diabetes than demographically similar cities in the state of Texas, because their soda has cane sugar versus high fructose corn syrup.

Fascinating. And a reasonable company would ask, Hey, why are we poisoning people and making them obese? Why don't we just sell them cane sugar? Like we do, like we're required to do in Mexico by the Coca-Cola in, Mexico has cane, sugar.

Coca Cola in the United States has high fructose corn syrup because I would say our government's corrupt and incompetent. And they've allowed a large company centered in United states to poison United state citizens.

And it's less expensive, right? It's the bottom line. They've allowed this company to put profits over people and poison Americans, while Europe is like, hey, we prefer you not poison our people, so you got to use sugar.

So anyway, all that's coming to head, which is really, really interesting. Yeah, Frito-Lay is in Dallas. I wonder how all of these companies… We are going to find out.

So accountability in science is a really big deal. Back to red light. Red light, you've seen science replicated in multiple studies in both ways, both topically on the face.

How does it work in the head? Why would shining, does is work on skin cells of the heads? I use a red-light hat to help maintain my hair, I'm really trying to keep my hairline.

I'd love it for it to come down, but I really try to hang on to my head. Does it works on a scalp? Does is penetrate

the bone and get into the brain? How is this work?

It does. It's fascinating. I remember back in college, I had Eric Pepper, he's at San Francisco State University and he teaches in holistic health. And I distinctly remember him telling us at one point, like sunlight, sunlight penetrates the brain.

He said that if you shrunk yourself and you took a newspaper, an old school newspaper and sat in your brain inside, underneath your skull, you would be able to read the newspaper.

Because that much light gets through the skull. Which I was like, mind blown. I know it was, like what, really? Does that penetrate our regular flesh?

So would sunlight get through our flesh compared to the bone? Yes, it gets through both. So we absorb light. We are light beings. I think we think of ourselves as biochemical beings, but part of that biochemistry is impacted by light and different spectrums of light, so absolutely.

Yeah, we do get it about eight inches is how far the red light can travel through space, and then the different nanometers of red penetrate different depths into our body.

And so it's not going all the way into the middle of the brain, but it is definitely affecting the brains by penetrating through the skull and through to the cribriform plate when we use the nose clip.

So for the body, some health gurus talk about, so Dave Asprey, who I really like, he told me about lines made of anorastin. Thank you, Dave. This was years ago.

He talks about getting full sunlight exposure. Basically, naked if you can, you lose points if your caught naked. So don't do that. Don't be inappropriate.

But you know, we see that the red light shown on testicles increases testicular production of testosterone. Oh, excellent. Glad I do the naked name. So, so sunlight daily on most of your body, that actually gets through the skin and gets into the, into, the body like our ancestors.

Our ancestors were probably outside most the day wearing very few clothes. They may have worn a long loin cloth. That may not, they may've worn more depending on the temperature and the cultural norms, but our.

we're outside and probably outside in the sun most of the day. And so you're saying as the sunlight actually penetrates our skin, but goes into our muscles and potentially our bones and actually affects our total body health.

Absolutely. Without a doubt, sunlight is penetrating our system and having an impact. So what else should people know about the V-light that's so interesting that lights in the red light hat get through the skull and affect the brain?

What else do people about this? You know, one of the things that stands out for me with the v- light is how easy it is, right? So we talk a lot about lifestyle medicine, which is absolutely foundational, like you cannot out supplement a bad diet.

You cannot exercise about a diet, you can't really In naturopathic medicine, our fundamental job is to establish conditions for health. You cannot do that without lifestyle medicine.

And yet, I love supplements because it's this great place to start. When we supplement with light, again, it is this easy win. It's passive. If you are struggling to care for someone who has more severe dementia, it's hard to get them to start a new exercise routine or eat things they don't like or swallow supplements they didn't want to.

But you can put a red light on and get some benefit. If someone isn't very motivated to exercise and not getting great sleep, you put on a light for 20 minutes and you see benefit over time.

Now you don't typically see benefit over one or two uses unless like in the cases I shared where it's quite severe disease. But what we do see is that over a month someone is different.

Over six months you can look back and notice that there is improvement. Now the other piece is if someone Right. So caregivers can get a lot of benefit and protection from this.

It works particularly well. There's data for traumatic brain injuries and PTSD. But when a care partner who is highly stressed at risk themselves for becoming, you know, having dementia later on, they can be using this to protect themselves while they're chopping vegetables or getting their meditation in or working out or, if you could even wear it as you're doing your bedtime routine or your morning routine.

So it's a nice way to add a significant therapeutic without using more time and without having to do the heavy lifts of lifestyle change. So Dr. Sanderson, are there any side effects to red light therapy?

You know, we don't see much. There's really not downside risk other than the cost. This is highly beneficial for ourselves. But with the VLite in particular, because the dose is, you can't change, it's only 20 minutes, and we don't see overstimulation with that particular device.

And we haven't had any reported side effects. So I was testing a red light device and they said, we recommend you have it on level two to start out. And I said this thing goes up to 10. I'm gonna try 10, so I turned up the 10 and I put on my head and with two minutes I have a headache.

Wow, this is really doing something, I don't know what this says. They also said side effects if you're not used to it, it could overstimulate you and disrupt your sleep if do it at night.

Reversal vs cure and practical next steps

But I definitely did the Elon Musk and turned it all the way up. One of the ways it works is by increasing perfusion. And this is one of those early signs of cognitive impairment.

So when we look at, we often do ASL studies or MRIs that show perfusions of brain and the perfusions studies that are hypo-perfuse where there's not enough blood flow.

That actually comes before atrophy, where we see shrinking of the different parts of brain. And so when we know there's low perfusion, one of things that I often say to people is, let's try some red light therapy, because that's going to help us increase in a very safe and effective way the perfuson of our brain, or the blood flow to the brain." And that's almost a precursor to a brain shrinkage, brain atrophy.

That's exactly right. Fascinating. So if you can find that and stop it there, similar to mild cognitive impairment, if can catch Alzheimer's at mild-cognitive impairment much better to address it before it becomes full-blown dementia.

Exactly. almost taboo word, certainly on social media and certainly in our world of science, is cure. The word cure, I won't say that on Social Media because I believe that my video might just come out immediately.

Just like I couldn't the word vaccine for the last four years, it would just get taken down immediately, same deal with cure if I say, if i say the that word I might get in trouble.

And so, I very much try not to say that, but that's what people are looking for. They're looking a cure or even the cure, right? I want the cured for Alzheimer's disease.

We don't talk about that. we talk reversal or prevention. And, so can you talk a little bit about this? Because you've seen this in your clinic. You've been able to reverse memory loss in patients.

Can you tell us about reversal versus cure? Yeah, I don't use the word cure because I think that's not what we're doing. What we see is that people get on the protocol and we reverse the disease process.

We see reductions in the causal level factors that lead to neurodegeneration. And we also see improvements in cognitive function. So it's a reversal, we are changing direction.

Going towards getting better rather than getting worse in a progressive disease. Now, if someone stops the lifestyle changes, stops, the supplements, stop sleeping, there's some new insult to their brain.

We see that they can sometimes just start going back the other direction. And it's actually highly likely that there is an Achilles heel, If you will.

There is a sensitivity and they are primed to go down that neurodegenerative path. If we take away the support system And so this is not a cure. I think of a care as being, you get an infection, a pneumonia, and you take an antibiotic for it and never think about it again.

You take the course of antibiotics, three weeks later you're 100% better, fully recovered, don't think again about having pneumonia again, cured, on the other side of that, doesn't affect your life anymore.

So that's more for acute diseases and infections. Think about curing an infection, whereas a chronic disease or disease that Alzheimer's develops over 30 years.

Research from the Framingham study in Framingsham, Massachusetts found Alzheimer basically starts 30 before you start seeing symptoms. Those who have high levels of inflammation at age 40 have an increased risk of Alzheimer disease 30-years later, age 70. So you can say the disease progression kind of starts there.

Yeah, we see this with other chronic diseases like heart disease, any cardiovascular disease. Diabetes. These are chronic, relatively progressive diseases associated with aging.

Osteoporosis is another one. And what we're looking for, I would love to see that there's a cure. But we don't have that. What we have are ways to manage these diseases and to prevent them from getting worse.

And then in the case of Alzheimer's, in my clinical experience and in research that we showed, you can see reversal of the disease progression. Sometimes we see stabilization.

Sometimes, you know, we can't guarantee this. This doesn't happen for everyone. But generally speaking, most people who put in the work, put the protocol to work who are able to implement the different pieces of it, they see improvement.

And by the way, guaranteed in science? Doesn't exist. I don't believe it. Someone once told me, they said, my doctor says that 100% of people who do this thing get better.

I said I don't believe that. Maybe you've got a really small sample size, but almost nothing works in 100 percent of the people minus a gunshot to the head.

Most people, that's going to end in death. By the way, most prescription drugs aren't even close to 100%. A really good one is about 50%. So I think Adderall, which is pretty effective for ADHD.

Think it's 50 to 70% percent people experience a benefit. And that is an extremely effective pharmaceutical drug. Very, very effective, highly addictive.

So that's rare. A lot of pharmaceuticals only work in 20 or 30%. I mean, goodness, the leukembi is helpful in, I don't know, 10% of people, and they're marketing that pretty hardcore.

Terrible side effects, not recommended. And so when someone says guaranteed or 100%, in a disease, be very skeptical. Now, and I just want to cushion this.

I do say regarding my supplements, I say, listen, results guaranteed or your money back. That's more of a

marketing guarantee where if you don't like it, i'm happy to refund your.

But that's not a guarantee that you're going to see. This is why you're willing to give people their money back. Exactly. I want you to try at risk create.

That's basically what it is. Cause I can't guarantee that you were going to take it correctly and that's going work with your individual biology. And you know, if you are drinking vodka every night and taking lines made, it may not help your sleep.

So I don't control that, but I'm guaranteeing that if don''t like it, I could give you your money. Back. so that guarantee is I am not guarantee result because I cannot do that cause I do not know your biology and I dont know what's gonna work.

Please be skeptical when you hear these things that works in a hundred percent of people. Right? Because that's very unlikely in biology. There might be something, but it's extremely unlikely.

So again, keep your skepticism up when you hear someone say, look, this works in all my patients. Well, how many patients do you have? You know, two doesn't count.

Right. Yeah. So we have the privilege of seeing hundreds of patients, having thousands of contacts with people through coaching, and through Murama, through Solcery.

And so we've seen over and over again that when this protocol is put to work, it does work. We do see improvements, not 100% of the time, but the vast majority of time.

Are you willing to share your numbers about what you see out of your thousands of coaching patients? How many people get better or show improvement or people who come to your clinic?

Well, I can definitely speak to the clinical trial because that was measured and, you know, we had the full a priori reset outcomes and what we saw was that 17 of the 23 participants in our clinical trials who had MOCA scores between 12 and 23, so measurable cognitive impairment, 17 of the 23 of them improved.

And across the mean of all of participants, so that includes even the ones who didn't improve, across-the-mean there was a statistically significant improvement in memory, overall composite cognition, in MOCA scores, and sleep and in quality of life.

Sleep, I love that. So I feel confident. The reason we did the study was because people would say, hey, if I spend the time, spend, the money, If I put in the effort to help my mom or my dad or myself, how likely is this to work?

And I didn't know the answer to that question. And so I really did this because I wanted to be able to answer people's question, is it worth it? Should I do it, what is the likelihood that it will work.

And now I feel like I can say with confidence, based on the Bredesen trial, if your MOCA scores over 19, 84% of people improve. If your MoCA score is between 12 and 23, 74% people improved.

And just like with any disease process, If you have stage four cancer, it's harder. There's less chance of recovery. It's going to take more effort, more energy, and more resource.

Same thing with this. If your disease is further progressed, if you are in the later stages, our confidence isn't as high. it takes more work, takes effort.

But when we start in those early stages in stage one in prevention, we have even better outcomes. And so what you're doing in your clinic is extremely effective, very good science replicated in multiple clinical trials.

And that's about 75% to 85%. So just want you to know that that is not a hundred percent, but this is really

effective. There's a pharmaceutical that was…

There was half this effective. There's just helpful in 35%. It would be a best selling pharmaceutical right now. I promise you that because nothing's even close to this.

And so helping 75% of the people improve cognition, improve their memory, who are declining. That's, those are incredibly good results, but that's still not a hundred.

So a 100 really kind of doesn't exist. Even when you're doing something extremely effective and big pharma would They have been paying billions of dollars to try to find something that works, even 20% of people, and they haven't found it yet.

So this, the behavior interventions that you are doing, that Dr. Breslin are are very, very safe. relative to almost anything else, very cost effective and extremely beneficial.

And as you said, please get started now. Get started when it's really inexpensive, get starting with your exercise and improving your sleep and spend more time out in nature.

Try getting a red light, doing redlight therapy or try spending more outside in the nature or turn off the television to help reduce your stress. Any of these things, do the free interventions now before it progresses into serious memory loss.

It's going to save you a ton of money, a tone of energy, and it'll improve the quality of your life. Robert, it's so fun to be sharing this message of hope with you alongside you.

Your enthusiasm and passion for this is infectious. And so I know that everyone is feeling fired up. So I hope that as we wrap up this conversation that all of you listeners at home are thinking about, OK, what can I do today?

What change am I going to make? If we're not committed to change, we are not going see outcomes. If you just keep doing the same thing over and over, you're going not to see the benefits.

But if we can commit to one change today, then that can start to have a snowball effect, a ripple effect on our health and outcomes. Robert, if you were to suggest people change one thing, what would you say?

Can we invite people to comment below? Oh, I would love that. What are you committed to changing? Put it in the comments. In the comment section, would you please put one thing that you're willing to change?

I'll give you my recommendation. And then if you have topics that he wants to address in future podcasts between the two of us, we'd love to answer your questions.

We want to make this as helpful for you as possible so you can have questions regarding brain health, Alzheimer's disease, dementia, slowing down the aging process.

Please put that in the comments. And then if you see one that you like, please like or comment on that comment. Then the ones that are getting the most support from you watchers, viewers, we'd love to include that and in future episodes.

So please do comment and we will read those. What I suggest is getting started. what's going to be the highest leverage thing for you? So my guess is it's either sleep, exercise, or diet.

Almost invariably, it is one of those. And you probably know which one is best for you. So if you're getting terrible sleep probably your sleep. If you eat a lot of ultra processed foods, It's probably that.

if don't get any exercise it probably is that If just don´t know where to start, I'd pick exercise. Because that's the small domino that pushes over the big domiino.

Or that is a small hinge that swings a giant That's the one thing that if you do, you're likely to do the other things. Because when you exercise, You're more likely eat healthy food.

Most people don't go for a run and then eat a bunch of Skittles. Very few people do that. That is a very, very bad idea. But most people go eat broccoli and Grasso beef and healthy foods.

most people don't stay up all night binging Netflix after going to the gym. Most people get good sleep because you sleep better. So when you exercise, you eat better and you asleep better almost by default.

It starts what's called the virtuous cycle. That's not my phrase, but there's the vicious cycle, if you wake up and drink alcohol, probably gonna then smoke your cannabis and then you'll be smoking cigarettes at work and than you're gonna complain about your boss and that you gonna watch Netflix at night.

You started the viscous cycle downward spiral. But when you start with exercise, that starts the virtuous cycle where you're spiraling up. You said, hey, I exercise today, and I'm going to do my gratitude journal tonight, eat healthy food, get to bed early.

And hey I feel good next morning, exercise again. So if you don't know where to start, exercises that you love, according to the Journal of the American Medical Association, think I got this right.

I've got some numbers wrong in a previous podcast. Approximately 4,000 steps a day reduces the risk of Alzheimer's by 25%, and 9,800 steps reduces risk by about 50%. In short, 10,000 steps a day cuts your risk of Alzheimer's almost in half.

So if you don't know where to start, find a really enjoyable walk that you like outside and just do that. And that'll cut the risk in and you'll eat healthier and sleep better.

What are your recommendations? Well, for me personally, I was sharing with you that we've had this terrible flood at Salisbury. It's been devastating.

Its a disaster over there right now. And it's kept me from sleeping. I'm spending time stressed out about how we're going to get up and over all of the remediation that needs to be done.

So I am doubling down on meditation. i have a daily meditation practice and I extending the amount of time. Usually I do 15. I've been doing 10 to 15 minutes lately.

Im extending that time to 30. because I notice how it makes me more creative, more compassionate, makes it easier to get through my day even in under stressful circumstances.

So I am a Pilates addict, so I will go to Pilate tomorrow morning after I get my matcha and my meditation in. And I'm looking forward to telling you more about the benefits of reduced stress once I m there.

But it's constantly we're reevaluating these lifestyle interventions and recommitting to them. It's a practice. I think both you and I, we each week, each day as each travel, as stressors come up, We revisit these things and re-commit to then.

So be gentle with yourself if you have fallen off the wagon and make this the day that you recommit to something that supports your brain health. So comment below what you're committed to.

We'd love to support you in that. And then questions for future podcasts, we'd like to answer those and we love you. Thanks for joining us. Be well. Thank you so much for listening to the Think Well, Age Well podcast.

If you enjoyed today's conversation, please take a moment to subscribe, leave a review, and share this episode with someone you care about. It's one of the best ways to help others discover tools and inspiration for aging well.

To stay connected, get bonus resources and never miss an episode, head over to drheathersanderson.com and join my email list. Until next time, keep thinking well and aging on purpose.