Fraud, Failure, and Hope: The Untold Story of Alzheimer's Research Transcript

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Podcast Introduction and Book Review

If we find the magic pill will 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't what we're signing.

This is doctor talks. Real talk from real doctors. Only issues that matter to you most. Welcome back to the Think Well Agewell podcast. I'm your host, doctor Heather Sanderson, 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't 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 it over a weekend and I couldn't put it down. The book is called Doctored by Charles Piller.

How fast did you read it? It's a thrilling book. I started it on a Saturday night, and I read it all day Sunday, and I was done by Sunday evening. So no year, 2010, a 24 hour period.

Yeah, it is fascinating. So what were your big takeaways? I love this book. Someone asked me recently for a book recommendation. They want to get into Alzheimer's research.

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

They've been lying to us. They've been lying to 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 our field have been lying to people for their own personal gain. So let me just I'm going to give you a quick highlight of of the book.

I highly recommend you read it. It's written for the layperson. It's written by a great writer, Charles Piller. And it's super exciting.

Amyloid Hypothesis and Research Fraud

So basically, what he discovered with the help of, Doctor Perry, who we interviewed recently, who's ahead of the trial of Alzheimer's disease, as well as another neuroscientist, Doctor Schrag, is that one of the main hypotheses in Alzheimer's disease is the amyloid beta hypothesis or the amyloid plaque hypothesis, which basically says amyloid plaque causes Alzheimer's disease and the result of people believing that theory is that tons of pharmaceutical money and tons of research has gone into trying to stop amyloid plaque from developing and therefore, quote, cure reverse Alzheimer's disease or get rid of amyloid plaque that it's already there.

Right? So this is NIH funded grants for many, many years. You know, the adage was if you weren't studying amyloid, you weren't studying Alzheimer's. So we doubled down on this hypothesis that amyloid was the problem, when in fact, what we've seen over and over again throughout the years is that when we target amyloid specifically, we do not get better outcomes for cognition.

And yet, in spite of that, there has been this this marketing effort to promote the amyloid hypothesis over and over again. And, oh, like, let's tweak it a little better.

Let's look for oligomers or let's look for 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. So let's say, hey, if we just block Emilia Clarke, that will prevent Alzheimer's disease. So they do that and the patients get worse and they say, maybe we need to target a different type of amyloid plaque.

Then they do that and then patients get worse. And then they try it again in a different population. And then, terrible side effects like brain bleeding are just awful things.

And they keep on tweaking the data or they keep on tweaking the theory. You know, the data showed this doesn't work. And then, doctor Dale Bredesen, who's my personal hero, some you got to work with very closely.

Doctor Breslin 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 to the brain.

I'm going to try something different. I'm going to try not using the amyloid plaque theory, but instead engage in healthy behaviors and find out with that.

And of course, the answer that is he was heavily criticized because the answer to 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. Doctor 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.

And of course, these things mostly are free and they're all people got better. And he was attacked. So the free thing that works, this is basically what happened.

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

Doctor present 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. The most that we spent for any one individual was $19,000.

Now that included all of the visits with the doctor, all of the labs, IVs, supplements, medications, everything that we did. Now to your point, the foundations of Doctor Edison's protocol, our lifestyle, they're the choices that we make every day about what we choose to eat, what time we go to bed, the people we surround ourselves with, how much movement we get each day.

Those are the choices that have a big, big impact on our lives. But supplements do cost money. Testing to make the protocol more precision based, more, individualized.

Those do cost 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 were in the prevention stage.

Absolutely. And in your book, Reverse and Alzheimer's, New York Times bestselling book, you can get this and work with a coach or work with 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 financed by pharmaceutical companies. If you don't believe me, just watch the news, see where the ads are coming from.

The ads are coming from pharmaceutical companies. 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't advertise to you, which is probably the correct thing to do anyway. So the things that work are attacked by big Pharma.

And of course big Pharma likes the things 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 use your money to perpetuate the amyloid beta hypothesis, which wasn't work in humans.

And then how Big Pharma then took that data and developed drugs to target amyloid beta, and those drugs didn't work, and then they fudged their data. That was the most outrageous thing to me.

That was so upsetting to me. Highly manipulated. I try not to get too upset, but I am allowing myself to be upset when when your health is put in 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. It didn't get better and they threw them out of the study. They just deleted their data that didn't agree with them.

And they said, look, it shows a benefit. 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.

So it's extremely unethical. It's terrible science, it's fraudulent, it's wrong, it's criminal. And then they tried to get people to keep taking the drug based upon the fraudulent science.

So basically, scientists at the University of Minnesota faked their data to support the amyloid beta hypothesis. They kept getting grant money. And then, pharmaceutical companies would pay money to have their fraudulent science published by certain journals.

They paid them a consulting fee. They said, hey, Journal, take a 10,000 hour consulting fee. And here's our most recent paper. They say, oh, that's approved without reviewing it.

And so and then they go to the public saying, hey, we post new papers showing our, our drug is great. And then their stock goes up. That's actually what happened.

And then people's lives are put in danger. And so 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 reason this was happening with a product that we're that 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 it was doing this work to support that you could 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 you can resuscitate zombie cells, zombie neurons.

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

I said, I don't know. 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,

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.

Lifestyle-Based Alzheimeru2019s Prevention

And they published their data in, in, in journals where they were paying the journal a consulting fee so that the editor of the journal, they're paying them tens of thousands of dollars, and then they're handing in research, and then they're publishing their their pseudoscience benefits.

Generic stuff. With this. Yes, there are certain journals that they published very quickly, and they were working with them as a consultant. Right. So it's legal to hire the editor of a journalist 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 fees 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 phase three clinical trials based on fraudulent data is scary.

Now, that being said, like we need science, we need solutions to this problem. And so we don't want to throw the baby out with the bathwater and say, okay, 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.

And so 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 for the sake of their careers, they have doubled down on a hypothesis that doesn't stand up. That's right, that a lot of the scientists have spent their career on amyloid plaque.

Keep on trying to prove that. That's the thing, rather than say it has improved out. Yeah. Let me research something else, which is frankly not very good science.

A good scientist should be skeptical of past findings. Rather, they should be open to new data rather than say no. I still think it's amyloid beta. Let me keep looking for data to support my my.

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

And Doctor George pairs what heroes in this book. He's so he's so great because he's he's doing the investigation with with George Pillar and professor and Doctor Schrag say, hey, what else is fake science?

What else is fake data? That's it's affected people. And let's get to the bandit. So he was fantastic. So you talked about replication. So so doctor is said in our field of Alzheimer's prevention and reversing Alzheimer's 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 shown the test of time.

And it's backed by multiple labs repeating replicating the same data. So what do people know is true in our field of

Alzheimer's prevention. So when I'm thinking through this like, how do I know what's true with a capital T?

How can I feel certainty about what is true? And first it has to make sense. It has to make sense to me. And so when I think about the human body and the people that I look at who are aging, who are aging well, who are healthy and vital, what are the things that they have in common, right?

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

They might take some supplements and they 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, or 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 we look to the science, sure enough, exercise, diet, meditation, stress, resilience, not being in isolation, but actually being in community.

All of these things are associated with reducing our risk. And in fact, many times we see improving cognitive function. So we see these both when they are stacked, like in the trial that we did.

Doctor Peterson did, 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 done.

Captions led that article. It was published in 2022, mine was published in 2023. And then the Ornish paper was published in 2024. And these are relatively small trials, but they are generally replicating each other.

And this is in humans. This is all 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 been replicated in multiple 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 was less of that, more about the support group.

But essentially they're stacked lifestyle interventions. When we do that, we see statistically significant improvements in cognition. Now, outside of that, people who I don't know who I've never met, who 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 a big impact. When you look at stress alone, it has a big impact. When you look at meditation by itself, it has the potential to improve cognition.

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 of them together, right?

Can we see even 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 with 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 about what if you do exercise weight loss and you you join a club of people who are who are trying to lose weight, community support.

Even better, what happens if your spouse helps you and your spouse? Like even better, right? What happens if you move to a community of super healthy people?

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

So what if you stack all these things, which is what you've done in your trial, which what doctor, president? They took a bunch of things shown in the science to help individually.

You put them all together. And the response, the result of that is reversing memory loss associated with kind decline, or in short, basically reversing all of the timer's disease or reversing that, reversing that loss, 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. It's great for the brain to do both together even better, and they think we can come back to it.

I always use the analogy, right, we've got these. We've got these plants behind us, right? We have house plants. And if my house plant were dying, what I look at it and go, oh, it must have misfolded proteins.

We need to get that right. Like I wouldn't look at a dying organism and think that I need to take out the beta amyloid from it. I would think it needs water, or maybe it contains too much water.

Maybe it needs nutrients, maybe it needs more sign or less sun. Maybe we would think 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 I may be a little controversial and a little aggressive here, media has been very harmful in this way because my father, who's very intelligent, he's still practicing law.

His dad has Alzheimer's disease. It had Alzheimer's disease. And so my father is very cognitive about not going it himself. He'll send me articles that the headline is they finally found the thing that causes Alzheimer's or new Discovery shows, that shows the root cause of Alzheimer's.

And I'm usually pretty skeptical. And that's some random really specific thing that I'm thinking. Well, I don't think that's the thing. I don't think that specific protein, I don't think that specific food additive virus, right, will be a virus or a food additive a b msg like sure, that can be a risk factor, but that that is the thing.

And then people click click on this, this is clickbait. And my dad saying this to me, Robert, you should incorporate this into your work and into your clinic.

Great. Deborah I advise 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.

Right? Just like obesity, there's multiple caused by some of these diet. Yes. But also their sleep probably that they don't exercise. They might have a job they don't like.

They might be divorced and be super stressed. They might be lonely. Combine all these things together and they might have toxins in their food, air and water which inhibit their metabolism.

Any one of those could be could be enough, right? 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't work for everybody, which is true, but really works for seven out of ten people. So truth will headline the B lifestyle to prevent Alzheimer's disease works in seven out of ten people.

Instead, they say it doesn't work for everybody and it's expensive. Try having Alzheimer's. That's expensive. Right?

A nursing home 1015 grand a month.

That's expensive. And so media has 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 the left.

I try to give you good directions. Disinformation is telling you the wrong thing. Right. The pizza joint is over that way when I know it's not that way.

That's what media's been doing. They've been telling you wrong information on purpose to confuse you. And I confuse person by default defaults. Their medical doctor who's trained and incentivized to prescribe drugs.

That's what the media's doing. And so they're trying to keep you 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's been then pretty helpful in our clinic. That's 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 my perspective is a little different. I can't sleep at night if I think that this is like there are evil villains out there really trying, it's like attempting to confuse people.

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

And like the GLP ones, they're part of that story these days. I love that spiel. I would totally sell the magic pill. If it works, I would love to be able to tell everyone about the magic pill.

And I think that's the narrative I like like antibiotics, like insulin. Like if we find the magic pill will 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't what we're signing, what we need as a as a multifactorial approach that addresses all of the potential things that could go wrong and be out of balance.

And that that's where we're seeing the best results, is when we address all of these factors that can contribute to poor brain health and that beta amyloid, and how proteins that have been made, the evil villain, that they are actually there to protect you, they are actually part of the response, not the cause.

Can you excuse explain it then? I want to share a joke my mother sent me. This is really. Oh, but I need to hear the joke. Then I'll tell this. Okay, so my mother will often send me, comics on on my phone.

This is a great one. That's a lovely image. Sending sending messages of humor, if you've any messages. Yeah. So my mother is great. And so, she sent me a message at the doctor's office, and they're they're looking at their results, and they're sitting across the table from it from a couple.

And they said, 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?

Replication, Common Sense, and Scientific Skepticism

Did I just says, oh, no, we have a drug for that to help you once, which is which is kind of what medicine is. Most people are sick because of lifestyle, most right now, which is a unique time in history.

In medicine, most diseases are chronic diseases, and most of those diseases are preventable. Most of us are due

to lifestyle. Bad lifestyle is what's causing most of them compared to a hundred years ago.

Most people are 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 into 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 heart disease, but you'll also be younger and healthier and sleep better, and you'll have better sex, and you'll have better energy and your life.

Improve in all kinds of different ways. Instead, they just offer the pill. So I love that joke my mother said, 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 the cause, but it's rather it has benefits and it's protective.

And it's it's a it's 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 amyloid helps to process metals.

It helps to protect us from metals. It helps to protect us from oxidative stress in the brain. It also there's other people who have researched how beta amyloid is anti-microbial helps to protect us from herpes viruses and spyware.

Kids and other things that can get into the brain. So when we're producing beta amyloid, it's part of it's kind of like a cytokine that we would think of in the periphery.

A lot of people heard about cytokines and cytokine storms after Covid, and these cytokines are there to protect us. It's part of an inflammatory mechanism.

So it's 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 of the toxin, whatever it is that's triggered this inflammatory response.

But if that insult that infection or that metal or that 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 caused the tau, what caused the inflammation?

And when we play there for those individuals, when we identify, okay, what was the smoking gun? What pulled that inflammatory trigger and won't let off.

That is when we can see real results. So what caused the amyloid is the really is really big question. And then the new question that that big Pharma is trying to answer is tau tangles.

But they're not asking the right question is they're not asking what's causing the tau tangles. They're saying, how do we stop the spread of tau tangles?

By blocking certain enzymatic responses and certain certain biochemical processes, which is how a big pharma thinks they're trying to think what what drug we give them to stop this thing, rather than how can we stop what's causing it?

And I know you and I share a reverence for the body, for the brilliance, for the divine design that is in our body. And I think again, when it comes to tau, I'm fascinated.

I'm so interested when it comes to beta amyloid. I'm fascinated and so interested. 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 we've seen, what's when we take away beta amyloid. We've gotten very good at taking away beta amyloid of getting it out of the brain.

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

They're terrific at they are awful. They have that diet. They're awful at stopping Alzheimer's. They're terrible at that. Your average, physical therapist, your average, personal trainers are better at stopping Alzheimer's than big pharma, but they're great at stopping amyloid plaque.

And so that's that's so interesting because yet they're great at doing that, but they're not great at stopping Alzheimer's disease. And so they're asking the wrong question.

So the right question is what's causing this. And and what are the benefits rated so fascinating. Like these things, instead of being evil villains, they're actually there to protect us.

So what how is that working? And maybe there's even something in there. I'm not anti pharmaceuticals, right? I love pharmaceuticals that help us. I prescribe them in my clinical practice all the time when appropriate.

But we want a wider toolbelt. 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 a amyloid is being 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 a reverence for the body and the biology.

I, I personally believe there's something greater than us. I believe, and I want to say I believe in a Creator God, but I believe in that idea. I believe there's something between us that created us and that helped design our bodies through the process of evolution.

That is amazing. And I engage in prayer, and I think prayer is really powerful. And so and the side of supports that the science, the amazing science shows the benefit of prayer.

Science even shows the benefits of saying grace. Just pausing and saying grace actually improves digestion. So if we are to it, should we pause and say grace?

Sure. Not even because we're eating, but is because why not? If you want to listen. Grace, no, please. If you're eating any food or eat any food today, thank you for this food we are about to eat.

Thank you for all that took to bring it here at the plants to animals, the sunshine, the rain. Please up this food to nourish our minds, space and spirits.

And thank you for the blessings of our lives, our health and our loved ones. I love it so. When you said, say grace, I thought literally you meant to say grace.

Oh no, and I. But I think you could do both, right? Just like take. And you say, grace, a moment of my mindfulness. I'm going to start saying grace. I love saying grace.

And so on that track, the idea of of the divinity of the body. Right. A lot of religions talk about the body is a temple. And 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 and our, our, our machinery, our biology is amazing. And it's so fascinating and so complex.

There's so much we don't understand about our biology. Biology is 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, quote, an anti-vaxxer. I'm I'm I'm skeptical of science. That doesn't sound right. And so I started hearing I don't know if you heard this.

People are saying the vaccine is more beneficial than natural immunity. I said, that does make sense. 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 100,000 years.

My immune system to awesome natural immunity from having the disease naturally, my immunities got to be better than whatever was developed in the lab over six months. It's got to 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 there's right thing there and there in the original risk group, and it was shown to be beneficial for that group.

At least that's what the data shows right now. I don't know what a deeper dive is going to show. I was not in the original risk groups. I. I healthy male below 65 wasn't likely to die, so I didn't get it.

But when I heard things, it just made no sense to me. Like like we're talking about the zombie cells. Coming back to like that just doesn't make sense.

The idea that a vaccine as of any vaccine is better than natural immunity. Does it make sense? Right? That's not the way our biology works. So I want you, the listener, to keep your eyes out, your ears out for things that just don't make sense.

If you if you, for example, here new solution to Alzheimer's found it turns out it's a magical pill we found at the bottom of the sea. Provision. Right.

Something from something from, jellyfish. So like, hey, we found the jellyfish. 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 keeps host calcium out of the neurons. And the proposed mechanism here is that we accumulate calcium in the neurons as we age.

But is true that happens and that we're going to hit an action potential faster when we have excess calcium in the neurons. And so provision basically is the only thing that pulls calcium out of the neurons.

Now, I've used provision 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.

I looked through all of the Amazon, all of the reviews, basically of, supplements that help support brain and healthy cognition and interestingly, that's almost like a clinical trial, right?

Because you're getting these long reviews from people, and people will come back six months later and say, and update the reviews, and you have huge amounts of data and people will mention certain things.

And Providence was not actually that effective. Lion's name was effective. Omega threes were effective. Yeah. They were all these things where people were emphatically reporting that they were getting cognitive benefits.

Providence did not was not 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 skepticism up and require extra proof if you're going to tell me something doesn't make logical sense to me based upon my understanding biology, you got to have a ton of data to reverse back.

So, by the way, if you show me lion's mane is not helpful for memory. I'm willing to change my position on that. But you have some really, really, really good data and it's got be replicated.

And I say, okay, I'm a scientist. I'm going to change my perspective on something based upon the new science. That's what being a scientist is. But you have to have really good data.

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

And so but there is something this really hot little pun there. There is something hot in our science, red light therapy. I'm sure a lot of people been watching it about red light therapy benefits for anti-aging, reducing inflammation, proving skin health.

I use a red light. I like to confront red light in the morning, to help with mitochondrial health. All kinds of benefits of red light.

Red Light Therapy for Brain Health

And doctors answered. I want to ask you about this because you've used this in your clinic. You've seen this in person. Help you can you help people understand a little bit more about red, like, yeah.

Why this is benefit and then why is it beneficial? There's specifically the red light hat. 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 Bastia, 12, 13 years ago. Gosh, 15 years ago. Getting old and young, maybe young.

That's right. I'm enjoying it. I actually, I'm not afraid of getting all I, I, I'm enjoying myself. So what happened was I had a patient who had departments.

This is a contracture another hand. And we had these lasers back then red light lasers, low level light therapy. And these lasers were like ten, 15, $20,000, right?

They're super expensive, really hard to get. And this guy with I get on the bus and he would come three days a week to have the laser put on his hand, and it was like 15, 20 minutes that we would do it in and he would get back on the bus and go back.

He would take all of this time to come get this laser. And I was like, dude, like, 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 weeks, my hand gets worse and when I come consistently it gets better. But I can't afford to spend ten, $20,000 on this laser.

So I was really intrigued at that point. But I didn't draw the dot. I didn't connect the dots between red light therapy and cognitive function until much later.

And, you know, as you mentioned, skepticism. I'm a skeptic, but I met Doctor Woo them 12 years ago, maybe ten 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 red light through the offering plate into the into the brain. And he was talking about all of the benefits.

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

And lo and behold, that really does help everything. So it's used esthetically, as you mentioned. I think you 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 on people who have the most severe cognitive issues that we had living at Miramar early on.

Miramar is your residential care center where you're where you're reversing memory loss. It's like the reverse of a of a nursing home, right? People go to a nursing home to kind of instead of memory care.

Our goal is memory recovery. And that's where you're seeing people come to your clinic get better than they leave. Well, yeah. And that always 100% better.

But we see improvements in 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 nurse nursing home to decline at at $15,000 a month or $10,000 a month.

So 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 she'd be speaking like a toddler.

It was really kind of a bizarre behavior. And we would put the red light on her, and within 20 minutes she was back to speaking in a normal voice. Now, she wasn't 100% cured. She wasn't 100% better.

But in 20 minutes 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 a red light.

This was the V light? Yeah, this is the V light. We use the neuro duo, which is a product that has both alpha and gamma. So gamma is used routinely for memory.

And at Bahama we use a six days a week for 20 minutes on our residents who live there. And that's what we suggest for people at home. And then Alpha is great because it's the only helps with anxiety.

And now we were using gamma for her and we saw this benefit. We saw this benefit even in gamma, not just Alpha, but on my staff. We can put if they're having a particularly anxious day.

We have a everyone try it at Miramar and at Salisbury. And 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 impairment 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 that 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 Hamlin. And he was at Harvard for a long time.

And Doctor Lou Lim, him and his group Betsy Light have also published studies with their particular device. And these the wavelengths are in the mid six hundreds and the mid eight hundreds.

And they specifically target the cytochrome c oxidase or have an impact on cytochrome c is, which helps mitochondria produce more ATP more efficiently.

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

Has that has been shown in multiple research centers by multiple scientists and has the benefits of red light therapy and a hat. Has that been shown? Has that been replicated as well?

Yeah, you'll see that there's multiple businesses popping up out there at Doctor Emma's at the light is the one who I've known the longest and who I have a ton of respect for him.

He's very high integrity. We've had a long term relationship, and I've just been really excited about the science that keeps coming out. And 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 is this really interesting Russian study that took post-stroke victims, and they inserted through the femoral artery, they inserted a red light, and we're shining it in that.

Yeah. Into the brain away from their lace, sticking something up into their brain. Yes. Right after shining, shining light. Oh my God. Shining red light.

And they saw that the stroke victims who they did that for it. They only did it once right after the stroke. And six and 12 months later, those stroke victims had better outcomes than those who did not get the red light shined in their brain.

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

Like, I bet that science was to be hunted down and taken to the Gulag and like, interrogated by Putin. Like, how dare you waste our community resources?

You see that movie? I don't watch very many movies, but did you see that one about the the doping? The biker? No. Somebody's got to put it in the comments.

What's the name of the movie? It's so good. It's mind blowing. Talking about Russian data, and you make this. You don't want to waste. You 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 lines. The to their equivalent of the NIH. I wonder what can happen to these fake scientists.

I wonder if they're actually going to get in trouble. I recently saw something that the state of Texas is now investigating Mars, the company Mars makes skills in memes 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, red, 40, yellow number five that they don't use in Europe.

And they knew they're bad for you. And Texas is open up investigation saying, hey, Mars, you knew this is bad for Texas residents. Why did you do this?

Because if they only saw it that way in Texas, I know they sell them across the United States, but Texas as a state is going after them. Now. The federal government may go after them as well.

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

And I imagine that's fascinating because all of Galveston is like super toxic, right? DuPont and all the chemical. I don't know if they're going to go after them.

Texas might not be as business friendly anymore. Oh, this is really interesting. There's a there's a I went to I went to the University of Texas for grad school.

And when I was there, we went to there's a, there's a city that makes doctor Pepper, but they make doctor Pepper with with King Sugar. They make it there and it tastes really, really good.

And they said, as there were some friends, that how you got to get doctor Pepper here? It's so good. I did it taste 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 sirup.

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 Coca Cola?

Mexico has cane sugar. Coca-Cola in the United States has high fructose corn sirup. Because I would say our government is corrupt and incompetent, and they've allowed a large company centered in the United States to poison the United States citizens. And it's less expensive, right?

That'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 that's all that's coming to HEB, which is really, really interesting. Yeah, Frito lay is in Dallas, I wonder, I wonder how all of these we are going to find out.

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

How does it work in the head? Why would shining. Does it work on the skin cells of the head by the way, I use a red light hat to help maintain my hair.

I'm really trying to keep my hair line. I'd love it for it to come down, but I'm really trying to hang on to my hair. Does it work on the scalp or does it penetrate the bone and get into the brain?

How does 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 like an old school newspaper, and you 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? That much like, does it penetrate our regular flesh? So would sunlight with sunlight get through our our flesh compared to the bone?

Yes. It gets through both. Yeah. So we absorb light. We are light beings, right? 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 we need to get it. About eight inches is a how far the red light can travel through space. And then the different nanometers of red light penetrate different depths into our body.

And so it's not going all the way into the middle of the brain. But it's definitely affecting the brain by penetrating through the skull. So through the form plate when we use the nose clip.

So, so for the body some health gurus talk about. So Data Astbury, who I really like, he, he told me that lines made it interesting. So thank you Dave Astbury. This was this was years ago.

He talks about getting full sunlight exposure, basically naked if you can. You lose points if you're caught naked. So don't do that. But don't be inappropriate.

But we see that the red light shone on testicles. Increases testicular production of testosterone. Oh, excellent. Yeah. Why do I do that? Naked. So, so. But sunlight.

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 of the day wearing very few clothes.

They may have worn a loincloth. They may have not. They may have worn more depending on the temperature and the cultural norms. But our ancestors were outside and probably outside in the sun most of the day.

And so you're saying is the sunlight actually penetrates our skin but goes into our, our muscles and potentially our bones. And actually, if that's our total body health, absolutely.

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

Well, should people know about this? Yeah. You know, one of the things that stands out for me with anti light is how easy it is. Right. So we talk a lot about lifestyle medicine which is absolutely foundational right.

Like you cannot out supplement a bad diet. You cannot out exercise about a bad diet. You can't. You just you can't you can't really. And that's public medicine.

Our fundamental job is to establish conditions for health. You cannot do that without lifestyle medicine. And yet it's you know, I love supplements because it's this great place to start.

And when we supplement with light again, it's this easy when it's passive. If you are struggling you 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 don't want to, but you can put a red light on and get some benefit if someone isn't very motivated to exercise, they're not getting great sleep.

You can put on a red light for 20 minutes and you can see benefit over time. Now, you don't typically see benefit over 1 or 2 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 is very busy, right?

Reversal vs Cure and Practical Next Steps

Like 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 you know 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 and or working out or, you know, 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, Doctor 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. There's been some reports I think you even mentioned that you experienced a headache when you tried, red light therapy of turned way up.

I'll tell you this right then. But with the v light in particular, because it's, the dose is you 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, since this thing goes up to ten, I tried ten.

So I turned up to ten and I put on my head for two minutes. I had a headache. I'm like, wow, this is really doing something. I don't know what this is.

And they also said, side effects. If you're not used to it, it could overstimulate you and disrupt your sleep if you do it at night. I didn't notice that, but I, I definitely did the Elon Musk and turned it all the way up. One.

So 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 we often do ASL studies or MRI's that show perfusion of the brain and the perfusion studies that are hypo perfused, where there's not enough blood flow that actually comes before atrophy, where we see shrinking of the different parts of the brain.

And so when we know there's low perfusion, one of the 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 perfusion of the brain or the blood flow to the brain perfusion okay.

So low perfusion is low blood flow. Yes. And that's almost a precursor to brain shrinkage. Brain atrophy. That's exactly right. Fascinating. So if you can find that and stop it there similar to mild kind of impairment, if you can catch Alzheimer's at mild cognitive impairment, much better to to address it there before it becomes full blown dementia.

Exactly. So one almost taboo word certainly on social media and certainly are in a world of science, is cure. The word cure. I, I won't say that on social media, because I believe that my video might just come out immediately, just like I couldn't say the word vaccine for the last four years.

Just it just could take you down immediately. Same deal with cure. If I say if I say 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 for a cure or even the cure. Right? I want the cure for Alzheimer's disease. We don't talk about that. We talk about 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 your patients. Can you talk to us about reversal versus versus cure.

Yeah I don't use the word cure because I don't think that's 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. We see improvements in cognitive function. So it's a reversal. We're changing direction.

We're going towards getting better rather than getting worse in a progressive. And what's what's assumed a progressive disease. Now if someone stops the lifestyle changes stops the supplements, stop sleeping.

There's some new insults to their brain. We see that they can sometimes just start going back. The other direction,

and it's actually highly likely that they will, that there is a 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 cure as being, you know, you get an infection, you get a pneumonia, and you take an antibiotic for it and you never think about it again.

But you take the course of antibiotics, three weeks later, you're 100% better. You're fully recovered. You don't think about having pneumonia again. You are triggered. You are on the other side of that.

It doesn't affect your life anymore. So that's more for acute diseases. And and infections. Think about curing an infection. Whereas a chronic disease or disease that's, you know, at all times develops over 30 years.

Research from the Framingham study in Framingham, Massachusetts, found Alzheimer's basically starts 30 years before you start seeing symptoms. Those who have high levels of inflammation at age 40 have an increased risk of Alzheimer's disease 30 years later, age 70.

So you can see the disease progression kind of starts there. Yeah, we see this at other chronic diseases like heart disease any cardiovascular disease, diabetes.

These are chronic relatively progressive diseases associated with aging osteoporosis 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 the research that we showed, you can see reversal of the disease progression.

And sometimes we see stabilization and 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.

By the way, guaranteed. And science doesn't exist. I don't believe it. Someone 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 got a really small sample size, but almost nothing works and 100% of people miss a gunshot to the head. Most people that's going to end in death.

By the way, most prescription drugs are even close to 100%. A really good one is about 50%. So I think Adderall, which is pretty effective for ADHD, I think it's 50 to 70% of people experience a benefit, and that is an extremely effective pharmaceutical drug, very, very effective, highly addictive.

So that's rare for a lot of pharmaceuticals. Only work in 20 or 30%. I mean goodness like OMB 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 myself once I say listen, results guaranteed are your money back.

That's more of a marketing guarantee where if you don't like it, I'm happy to refund your money, but that's not a guarantee that you're going to see. I can't guarantee you're going to get benefit because that's why you're willing to give people their money. Exactly.

I want you to try it risk free. That's basically what it is, because I can't guarantee that you're going to take it correctly and it's going to work with your Inovio biology.

And, you know, if you're drinking, vodka every night and taking lines, mate, it may not help your sleep. So I don't I don't control that. But I'm guaranteeing that if you don't like it, I can give you your money back.

So that's that's that guarantees I'm not guaranteed results. Because I can't do that. Because I don't know your biology and I don't know what's going to work.

So please be skeptical when you hear these things. It works 100% 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. Yep. Two doesn't count right.

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

And so we have 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 the time.

Are you willing to share your numbers about what you see over your thousands of 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 we had the full a priori reset outcomes. And, what we saw was that 17 of the 23 participants in our clinical trial who had Moca scores between 12 and 23, some measurable cognitive impairment, 17 of the 23 of them improved and across the mean of all of the 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 and Moca scores in sleep and in quality of life.

Sleep. I love that. Yeah. So I feel confident. You know, 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 this 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 Brisson trial, if your score is over 1,984% of people improve. If your Moca scores between 12 and 23, 74% of people improve.

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, more resources.

Same thing with this. If your disease is further progressed, if you're in the later stages, our confidence is as high. It takes more work, it takes more resource, takes more effort.

But when we start in those early stages of stage one and prevention, we have even better outputs. And so when 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's not 100%, but this is extremely effective. There's a pharmaceutical that was there was have this effect.

It there's just help on 35%. You 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 care declining, that's those are incredibly good results.

But that's still not 100. So 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, the doctor president are doing very, very safe relative to almost anything else, very cost effective and extremely beneficial.

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

Try getting a red light, doing red light therapy, or try spending more time outside in 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 ton of energy, and it'll prove the quality of your life right.

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, okay, what can I do today? What what change am I going to make, right?

If we're not committed to change, we're not going to see outcomes. If we just keep doing the same thing over and over, we're not going 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. Right? If you were to suggest people change one thing, what would you say?

Can we invite people to to comment below? Oh, this is great. That so what are you committed to change? So below 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 you want to address in future podcast 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 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. And then the ones there getting the most support from from you watchers viewers, we'd love to include that in future episodes.

So please do comment. And, we, we will read those. So 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's one of those and you probably know which one is best for you. So if you're getting terrible sleep, probably good sleep if you eat, a lot of ultra processed foods, it's probably that if you don't get any exercise, it's probably that if you just don't know where to start, I pick exercise because that's.

No, that's the that's the small domino that pushes, the big domino or that's a small hinge that swings a giant door. 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 to eat healthy food.

Most people don't go for a run and then eat a bunch of Skittles. Very few people do that. That's a very, very bad idea. Most people go eat broccoli and grass fed beef and healthy food.

Most people, don't stay up all night bingeing Netflix after after going to that, going to the gym. Most people get good sleep because their body. Do you sleep better?

So when you exercise, you eat better and you sleep better almost by default. So it starts what I call what's called

the virtuous cycle. That's not my phrase, but that's a you know, there's the vicious cycle.

If you wake up and drink alcohol, the probably go to then, you know, smoke or cannabis and then you'll be smoking cigarets at work and then you're going to, you know, complain about your boss and then you're going to watch Netflix at night, right?

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

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

I got some numbers wrong in a previous podcast. Approximately 4000 steps a day reduces the risk of Alzheimer's by 25% and 9800 steps. Reduce the risk by about 50%.

So in short, 10,000 steps a day, cut 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 will cut the risk in half. And you'll eat healthier and you'll sleep better. What are your recommendations? Well, for me personally, I was sharing with you that we've had this terrible flood.

It's very it's been devastating. It's a disaster over there right now. And it kept me from sleep being 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.

And so I'm doubling down on meditation. I have a daily meditation practice, and I'm, extending the amount of time I usually do. 15 I've been doing 10 to 15 minutes lately.

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

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

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 loved.

We'd love to support you in that. And then questions for future podcast. We'd love to answer those. And, we love you. Thanks for joining us. You. Well, thank you so much for listening to the Think Well, Well podcast.

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