Optimizing Epigenetics for Peak Cognitive Function Transcript

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Introduction to dementia genetics

So the next talk we're going to do, really blows my mind, because this is the one area when we get into genetic testing. The number one reason why people tell us I don't want to test is because I don't want to know.

And it usually has to do with dementia and Alzheimer's. And I can't tell you how many people will say that. Yeah, I did, I did. If I were getting Alzheimer's, I just I'd rather just not know.

And that wait and see approach as you're going to learn today is really the wrong approach because you're you're not really understanding why this happens and how much it actually is in your control.

And to take for granted that while my grandmother had Alzheimer's, my grandfather had dementia. So it's probably in my genes. That's just the starting point.

The genes are suboptimal. There's other things you're doing that are creating the load. Why did it happen when you're five years old? That happens a lot later because it takes a long time and making the wrong choices to get there.

And today, Heather Doctor Henderson, Heather Sanderson is joining us, who has been doing this work for some time, blowing us away in terms of her sort of ability to even reverse, forget about, prevent and treat, but reverse conditions.

So first of all, thanks for joining us. Thanks so much for having me. So, the work you're doing, you know, there's genetics of genetic expression, then there's understanding environment and lifestyle.

Everything around you. So what do you think are those core factors that really affect genetic expression? Yeah. Great question. So the way that we approach dementias is very much what we're aiming to do is be comprehensive, right.

Because what affects the brain, everything. It's everything that's coming in every how much is coming out, especially of the things that you don't need or the things that are going to make up cellular function.

So we think about balance. That might be a synonym for health, right? Even a healthy brain needs to be balanced in terms of neurotransmitters, toxins, inflammation lots of different things.

Why dementia is not inevitable

And so we want to do is say what are what's the comprehensive, what's the sum total of things that are going to affect cell function in the brain. And I would argue that it's toxicity nutrients structure stressors and then infections and structure includes DNA.

Right. This is our molecular structure that sets us up to have like an Achilles heel. Right. This this thing that maybe will manifest as dementia can in fact start with a genetic predisposition.

And I love what you said about how you started this conversation. There are so many people that don't want to know if they have a genetic predisposition to dementia, because they've been told by very well-meaning providers or, you know, experts in the field that there's nothing you can do.

And the things that we can do like, at a C and raise inhibitor like, and Amanda and Aricept that these drugs, although we have them, they don't work very well.

So get your affairs in order. If you start to notice cognitive decline. And there's even social stigma rated as soon as you notice cognitive decline. Hate it. Right.

There's nothing you can do. And people are going to ostracize you, or you're going to have to be sent to an old folks home. And this is the narrative that I'm here to change, because what we see over and over in my clinical practice is that the earlier we intervene.

So if you know ahead of time that you have this Achilles heel, that you have this genetic predisposition, then you can work harder. You can work harder than your neighbor or your spouse or whoever doesn't have it, but you have the choice to start prevention earlier.

And then the other thing we see is that those who have the genetic predisposition, predisposition and then start to notice, oh, my brain isn't working.

I, I would have remembered that number. I would have been able to do that math in my head. I would have remembered that person's name or that address ten years ago.

The second that starts to happen, if we can, then you know that can motivate us to make behavior changes, then we are in business. We can do a lot. I firmly believe that Alzheimer's is optional.

Based on what I've seen now, I would not have said that 3 or 5 years ago. I've just watched it happen over and over and over again clinically. And prevention is hard to prove right.

And you certainly can't do that in a handful of years. You need, you know, big long term studies to prove prevention. However, what inspires me most are the people with severe disease, severe dementia.

And we get to there. I think of them like flowers. We make their their but even their their posture is great and they're folded and they're they're not verbal.

They're depressed, they're anxious, they're communicating with like, not always violence, but sometimes like shaking and, and and just they can't find the words they can't express themselves.

And we see them, like, perk up and start to communicate and engage. And they're not, you know, even people with severe disease, we haven't had anyone go back to work, but they are able to say, I'm hot, I'm cold and hungry and in and experience joy in life again.

And so that quality of life can change. We can see reversal happening. And to be fair, I've only been doing this since I was, trained by Doctor Bateson.

So there's a lot of potential and possibility here, of course, for the people who don't have the disease yet, but even for those who are already suffering. Right.

And for those that are, I mean, you say it's hard to prove prevention. And first of all, there's there's a lot of support for that either. Right. Meaning that the studies aren't designed that way.

But in proving reversal in itself proves prevention. It's the same thing. The mechanism of reversing disease is exactly what you do to prevent it. Right?

You're saying I'm going to get to the root and I'm going to eliminate or forget about what you're feeling? I understand that's the pain point. That's the thing that you're complaining about.

But there's something going on layers before that. That's what you're going to work on. And yeah, I agree that the clinical experience, the clinicians that are saying, you know, it's going to happen genetically, it's because they haven't understood that there's other tools available, right?

So that science is coming, like trailblazer, a trailblazer like you are building it and eventually it becomes mainstream and that everybody adopts it.

But for now the toolkits are limited. So that's what you get, right? So if I got to find people like you. So now to do what you're describing, like to some people just sounds like that doesn't even make sense. Like, how is that possible?

So how do you actually put a plan together? Like, what does it look like to manage somebody's genetic expression and take them from where they're at or prevent something from coming?

What does that look like? Yeah. So, you know, it's funny cause people care like there's nothing you can do and it's almost the opposite. There's so much we can do, it can start to feel overwhelming.

And so what we what we want to do is create a plan. Right. And this is not this is a disease as you kind of alluded to, that it doesn't happen overnight.

You don't just get dementia. There are decades of degradation in the brain that then lead to the manifestation of memory loss or even personality changes or cognitive dysfunction.

And so, of course, we want to start as early as we can.

Comprehensive testing and treatment approach

But sometimes, and this is the way we actually design the trial that we're doing. In my clinical practice at Salisbury right now, we just have two more data points to collect, and then we're done with data, and then we'll be published by, later in 2022.

And Doctor Bateson had a very similar trial that they published in April of 2021, and they took 25 participants with measurable cognitive decline. In our trial, we went down to Moca.

This is the Montreal Cognitive assessment, and it's a 30 point dementia scale. So we took participants with MCAs down to 12. So struggling with that, taking activities of daily living but still verbal, still able to able to put a sentence together.

And the perfect score is 30. And so normal is about 26 ish. And in our trial we took people with measurable decline. So between 12 and 24. And then what we measured over six months is what happens when we throw every thing at it.

So we take that as an approach. We measure all of the tests. We look at the AP for for genetics. We look at, you know, their cholesterol, of course, like what a conventional doctor would do, but on steroids, thyroid testing, cholesterol testing, vitamin D testing, hormonal testing.

And then we also looked at these, what I was talking about earlier, these causal level factors. So toxic burden. And this toxic burden is I think of it in like three flavors like ice cream.

Right. Like you have mold toxicity, you have heavy metal toxicity and particularly mercury, arsenic, cadmium, lead stand out. And mercury especially is very neurotoxic.

And then you have chemical toxins, things like roundup, glyphosate, things like petrochemicals, parabens, PCBs, organophosphates, that kind of thing. So we measure all three of them.

And then where they show up for people, we get rid of them. And that that's one of the first steps, is making sure that we get rid of the things again, that are mucking up the system in the cell that allows you to make enough energy.

So we look at toxicity, we measure it and then treat it. We look at nutrient levels. We measure that and treat that. And then I use some no trophic support, which means it's getting all of those building blocks to the brain that you need in order to have neurotransmitter function in order to have good neurogenesis.

We also suggest that people get on and support them with health coaching to get on a ketogenic diet so many times as we age, because we've been on a standard American diet, maybe, or at least getting the sugar carbohydrate every day.

For most of our lives, we, unlike our ancestors, we have that available 24 hours a day, seven days a week. And so we tend to consume a lot of carbs. And the way that we're designed is really to go back and forth from burning carbs for fuel or sugar for fuel to burning fats for fuel.

And over time, the brain can become less sensitive to less efficient at burning sugar for fuel. So when we just switch the fuel to ketones, we get enhanced cognitive function.

People also get the benefits of better sleep and better mood and weight loss if they're looking for that. So there's a lot of wins around that. Sometimes there's a bit of a hump to get up and over, but we again, we have the health coaching support that really, is the handholding that's necessary.

This is a hard program. And right, I've only talked about two pieces the toxins and the nutrient so far. And it's a lot it's a lot for people to take on.

And so I get that and and having enough support. This is a lot for somebody with full cognitive capacity to do so, let alone somebody who has declining cognitive capacity or where we need to get caregivers involved and lots of people involved.

So making sure there's enough support that people can be successful. It's a really important here. And and I also want to acknowledge like it's hard. Yeah it is people the behavioral change element of things is it's one thing to be told it.

And the first of all what's wrong. And then how do I fix it. But how do I actually do it. Yeah, that's very challenging. We should probably talk about that, but I want to ask you the one thing you said about people.

We, there's people here that, you know, they know that it's a bad news thing, but what's actually going on there? What is happening that people need to be worried about?

Yeah. So e again, like, thinking about our ancestors, all our ancestors for the vast majority of human evolution, until, like, this tiny blip in our recent history have had a body for, for status so that they express these genes and, or they, they had these this genetic potential and approved for it helps.

It basically has it codes for cutting proteins in different places. And what happens is that the Abo and amyloid that gets formed more easily when you have this ability for, for genetic status, it's anti-microbial.

So you can imagine that in a world that our ancestors lived in, where there were many more parasites, you know, there wasn't much of a sterile environment, is what we live in now.

This was very, very helpful to have more inflammation, a little more inflammation in the brain that helps. That was anti-inflammatory, that helps with infections that were getting into the brain, particularly if we only lived for 40 years.

Right. If we weren't living into our 80s and 90s, then this could be really beneficial. We would have a brain and we would be able to live longer, with this sort of defense mechanism in the brain.

So the ability for forced status means that you create more inflammation more easily, and you create beta amyloid plaques in the brain more easily when you have that genetic predisposition.

Now, what we've seen is that the the statistics are essentially that the general population has about a 13% chance of getting dementia. And if you have that ability for four to fours, one from your mom, one for your dad, then you have about a one inch two chance of getting dementia.

Now, if you have 3 or 4, you have about a 1 in 3 chance. So a 30% chance, which is still of course much higher than your 13% chance. And if that's the case, then what I would recommend is seeing a Bredesen train doctor as soon as possible.

If you know you have a three, four, four, four and get you started on this plan, make sure you have no toxins, no metals, no molds, no chemical toxins.

You're we live in a toxic world, so I don't want, you know, there's this crazy making thing that can happen here where you get to obsessed with that. So it's doing the things you have control over, right?

And taking the steps that you can to eliminate or at least reduce that toxic burden as much as possible, doing that from your 30s and 40s so you don't have to worry about it doing the damage and and turning on that genetic potential of inflammation, and then treating infections.

So so we went through toxicity and then nutrients. Now stress is a big one. And meditation, the kirtan kriya, the Saturn, we have all of our patients and then at Marana.

So I have another, I have a residential care facility for the elderly where we offer an immersive experience and in this lifestyle. And it's because implementation is so challenging.

And what I was seeing clinically was that most people get better. And the ones who don't just don't have the ability to intervene or to implement. And so I created this residential care facility where people can come and just immerse themselves in it.

And so every day, for 12 minutes, all of our residents do certain and there's good literature, supporting that. This helps with cognitive function. It's also really wonderful to watch because when people first move in, they, you know, they can't they keep their when I open to make sure that their fingers are touching each other and then as they do it day after day, they learn you can see their their brain is making those connections.

Toxins, nutrients, and ketogenic support

There's kinesthetic connections, to get their, their thumb to hit their pointer finger. It's great. That's awesome. And and then I mean, they're these people are blessed that they're able to work with you directly in the facility and get access to this.

So then how about somebody that has the information? Okay, I know my status, I know what's happening or I've been diagnosed. Even if they learn from you, how do they implement these changes?

That's the key thing that you kept saying. It's like it's one thing to know. It's another thing to understand. That's the very beginning of the journey.

Now you got to start working on it. So what are the tricks or hacks that people can do to actually get themselves to do it? Yeah, it's such a good question.

So I highly recommend working with a health coach. And through, Paulo, which is doctor reticence company or three. So say we have health which is available that can support anybody anywhere in the world.

I'm also working on a new project that we're calling from at home right now. And so I offer free webinars, where people can come and learn about what we're doing at Marama, learn from some of the mistakes they've made, some of the, the, issues we've faced to help support their loved ones at home.

And there's certainly a growing community of people who are looking for this information and compiling this information, teaching each other and learning from each other.

I know that, in Doctor Patterson's work, there was some mention of a unique vitamin E call, a talk with Trino. Okay, so Toka Trino is our. That's a name for vitamin E, and vitamin E is an antioxidant and certainly important.

One of the nutrients important in cognitive function. And I my opinion is that you want to get mixed. Tocopherol is another word. So you don't want to get just gamma or just delta.

You want to get a mixed tocopherol, which is what is present in foods and what your body needs to to utilize. So the intention is by taking this cocktail that you're promoting antioxidant of behavior or is that what's going on.

Yeah. With the so well, you know, really my, my primary message is that it's not one thing. Right, to pick on vitamin E, I probably wouldn't I probably wouldn't do that too much.

But really go back to like, what are all of my nutrients do? Is there an opportunity to measure them? Can I get more more vegetables in right that are going to be highly nutrient dense foods?

Can I get out the foods that are not as nutrient dense and or just full of carbohydrates. Right. And then just really increase what is can help with the gut.

It can help with sleep. And you know, a lot of the foundations are better when our diet is better than our energy is better. And then we can get that foundation of exercise involved, and then we're getting better blood flow. Right?

So it's really, I come from a, a complex system science sort of perspective. We don't we want to make sure we don't fall into that trap of being reductive.

Right. It's like, what's the pill to make this better? It just does not work that way. We have tried that. Billions of dollars and countless hours of very smart people's time have been wasted, kind of going down that path for dementia.

And what we find is that, you know, about 75% of the time, based on the bread and the tubes spread US and paper from last year, we can reverse dementia by doing this comprehensive approach.

There was actually a recent, small feasibility trial of nine participants out of Florida, looking just at the ketogenic diet. And in six weeks alone, they're getting they were getting, an improvement in cognitive function on their testing in just six weeks, getting them into a sense.

That's awesome. You know, that reminds me that, I'm in Toronto, right? So different country on the other side of the border. Health Canada, the equivalent of your FDA about, I would say, a year ago, said that we have to start calling Alzheimer's type three diabetes.

Yeah. Right. And the interesting thing is that that was the first and last time you heard that in Canada. I mean, so the the science or research that drove that conversation was there, but it wasn't sort of picked up.

You know, nobody ran with it other than people like yourself who already understood that that's where things happen and how you actually get to the root cause.

So a lot of people have this challenge where I get what you're saying. It makes sense to me, and I know you help people. How do I convince my doctor to work with me?

Yeah. So that's I hear you. That's an uphill battle. And I think if you're talking to a doctor that is, you know, is telling you, no, don't don't listen to them.

There's nothing you can do for dementia. There's there's not enough science. I mean, it's a fair criticism that there

isn't enough science. And where we are is that we've done feasibility trials.

The reason that this wasn't done 10 or 15 years ago is because the IRBs or the internal review boards who are this is I applaud this, right. Like there's nothing wrong with this, but IRBs are set up to protect human subjects in science, in research and the IRBs.

We're in a place ten and 15 years ago, even until like five years ago, where they did not approve research trials that had so many factors in them. Right. They want their variables limited.

And so this is a place where and we see this and a lot of, you know, this is that reductionism. Right. So we're reducing down to one pill. We want to change one variable.

And I mean this is this really applies not just to medicine not to just to dementia. This applies to diabetes as it applies to autoimmune disease. This applies to government systems.

This applies to financial systems. This applies to education systems. Right. When we try to get reductive when we're talking about a complex system, we're not going to find solutions.

So this is a place where the science and the model of, you know, there's this hierarchy of double blind, placebo controlled trials. And that model doesn't serve us.

It doesn't allow us to find the solutions that we need for these more complex diseases. Right. It helps if you have strep throat and you can compare an antibiotic to a control.

And some people get better and some people and the people on the antibiotic get better, and the people that don't don't. But if you have dementia, which has, you know, can be from blood sugar dysregulation like you suggested rate type three diabetes is another synonym for dementia.

But I would also say that's an oversimplification because you can have perfectly controlled blood sugar but have low hormone levels, or you could have had a traumatic brain injury, or you could have an infection like herpes or gingivitis in the mouth or Lyme disease.

And that can trigger enough inflammation in the brain that you start to have cognitive dysfunction. So we don't want to I think, although many, many, many people would and most out to the vast majority of people would benefit from getting into ketosis, from having that metabolic flexibility of going back and forth, from burning fat for fuel to burning sugar for fuel that isn't going to solve all of it.

And so, yes, it's a lot. Yeah. It sounds like, you know, the kitchen sink approach sometimes it's like, no, let's figure out what in that pile work. But that's not you know, when you're dealing with something as complex as dementia and Alzheimer's, your brain, you're losing your brain.

It's the multifactorial approach. That's what it is, that the truth is that there's many things hitting you on many fronts. You got to deal with them.

And then there's the the gap between, you know, men and women. And there's there's an organization up here in Toronto, called the Women's Brain Health Initiative.

Right. And they do a really good job. They raised a lot of money to help gear research towards women because I think it's something like 80% of the research dollars are spent on men, but 70% of the cases are in women.

Genetic risk, APOE, and inflammation

And so we're not solving the right problem. Right. So do you have any insights into is this is a is it a hormone thing. Is it why is it that so much more prevalent in women.

Yeah, it's such a great question. So there's a few factors a handful of factors. And I probably won't have a comprehensive list of all of them. But certainly there's a hormonal component.

And estrogen is. So estrogen and progesterone and testosterone, all of our sex hormones are extremely important for cognitive function and for signaling the brain to make new neurons right.

These hormones are associated with youth. Imagine like when your hormones are raging and at their highest, this is like your teens and 20s. And this is when you're learning so much, right?

This is typically when we're in school and we can take on new things. And that is what we want to, you know, you don't need to go back to being a 19 year old male, but you can increase, we can increase our, estrogen and progesterone and testosterone and DHEA and pregnant alone in our for women in these post-menopausal years. And if you touch a postmenopausal woman who's struggling with cognitive decline nine out of ten times, she's going to say yes when menopause hit, that was a big shift for me.

There was a massive hormonal component to what was going on, even hot flashes. So hot flashes happen because there's not enough estrogen getting to the part of the brain that regulates temperature.

And so women will swing from hot to cold and hot to cool and then this I mean, it's it's just such a great illustration that this is the effect of estrogen on the brain having very real impacts on how you feel day to day.

And so we can't just think that like, oh, these, these sex hormones only work in the torso. Right? They absolutely affect the brain. And that, that shift, that dramatic shift with menopause is a is a big one.

So for you know, everyone needs to work with a doctor. And I would say if you're working with a doctor who's telling you that this isn't real, go find another one.

And and Doctor Bateson on his Apollo site has a list of doctors who have been trained. Or you can Google like Bredesen trained doctor. And I'm sure wherever you are, hopefully I know that they're working on training as many people as possible.

But, finding somebody who's been trained by Doctor Bateson, who's aware of this and familiar with this and can guide you through the risk benefit analysis of replacing hormones.

So we did do that with all of our study participants. We replaced hormones when they were low and and certainly many of them anecdotally, you know, say that adding the hormones makes a big difference.

It also helps because muscle building muscle is that send signals to the brain, Bdnf and trophic factors, lots of things that are important, in the feedback loops.

And if you have energy which is associated with those hormones, if you're able to build more muscle, which is going to happen with the addition of certainly testosterone, then you're going to get more of those benefits for the brain, right?

This becomes, it becomes a self-perpetuating cycle, in the right direction. Right. And that just it goes right back to what you've been saying all along, that it's not any one thing.

You have to be multifactorial. You got to look at all of it because even within one person. So you may have this dashboard if you look at it like digitally up.

Here's the ten dials that we need to turn. Right. Yeah. And you may be low or somebody else is high, but you still have the same outcome because there's so many other dials to look at.

So really got to work on all of them. There's testing you can do to understand where you're at. You know where to focus. So what would you recommend to people in terms of where do I start?

What tests can I take to know what my priority should be? Yeah. Great question. So Doctor Bateson wrote a book in 2017 called The End of Alzheimer's. He also has a couple of follow ups.

What is the, the end of Alzheimer's protocol? And the other is the first survivors of Alzheimer's, where he interviews and tells the stories of people who have reversed their dementia.

And so those three books are very insightful, and in particular, that first one in there, there is a list of all of the labs that he recommends doing, and you can even sign up for his program, called Recode or pre code.

So pre-COVID, for those that want to prevent and then recode for those or who are looking to reverse cognitive decline and you can get labs directly through them, they put them into, an AI generated Recode report that then gives you suggestions.

And that is a fantastic place to start. So either the book itself and just reading the book, getting into ketosis, doing what it says, I've had patients show up in my office who have done that, gotten phenomenal benefit, and then they want to take it to the next level by getting all of the comprehensive testing done and working on those pieces.

And then there are other people who just, you know, read the book and that's that's good enough for them. Other people get on the Recode subscription and in their program, and that works really well.

Some people hook up with a health coach. There's lots and lots of resources and options and, whatever works for you so that you're implementing as much of it as possible at home.

Is is the best thing. So you know what? I'm listening to you. It's obvious that you have a passion for this. I mean, it's not just your work, it's it's what you live and breathe.

But also you said that this is fairly recent for you. So prior to this, what were you doing in medicine? I'm just curious. Yeah. So I'm a natural fit doctor.

I was trained and that way, and I was always interested in sort of how to organize ourselves around health. And there's a lot and it can feel a bit overwhelming.

And I had this tension of kind of going back and forth between telling people to do a lot, but having them feel overwhelmed and then kind of paralyzed by that and then not telling them to do enough.

And then they weren't getting the outcomes that we were hoping to get. And I again, like I come from this complex system science background.

Stress reduction and implementation support

So I heard Doctor Bredesen speak at a conference, probably in 2016 or 2017. And I had heard, you know, from well-meaning instructors that there was nothing you could do about dementia and that to suggest otherwise was really to do harm.

Rates and mislead people and to give them false hope. And so when I saw him speak his complex, you know, he was taking this complex system science, comprehensive approach.

It made sense to me. It made common sense to me that if you could upregulate cell function in the brain, you could reverse the disease. And again, I'm a natural path.

So I believe that every body has the ability to heal. Right. It's kind of like our superpower. And so I saw Doctor Pederson's talk. I was intrigued but skeptical.

So I went to his training. And then when I got back from the training, I was on the list. Right. So the now patients were coming to see me. I had been doing a lot of women's health to some complex disease.

Some like neuro hacking, biohacking stuff that was proceeding, and then once I was on Doctor Peterson's list, I started seeing dementia patients, and I was, I think, the only person in San Diego at that point trained.

And the first patient I saw, Linda, I came in with a Moca of two. So I'm not on that 30 point scale. She was very progressed. I would ask her a question and I could see the wheels spinning.

I could see that she heard my question and understood it, but she didn't have the ability to remember it long enough to give me an answer. Wow. Really simple things.

She could say yes or no to. Her handwriting had been affected, but you could see like you could see her personality. There was she had like really loud clothes and this big smile.

And her husband was very committed to this process. And so we sat down and we laid it all out. They I recommend they change their diet, have have her dental work done.

They started ballroom dancing. They moved out of a moldy home. They got her on hormones and all of the supplements that I recommended. And then I saw her seven, eight weeks later.

Her Moca was a seven out of 30 instead of a two out of 30, and her experience of the world was so different her handwriting had had gone back to normal. Her.

She was bickering with her husband about something that happened the night before, which, like, I was just in disbelief. Like I was like, did we do something wrong? The last time?

What happened? And they were like, no, no, we just did everything on the plan. I know I couldn't believe it, but I remember like what I was wearing. I remember the whole day.

So I, you know, because it was just one of those moments for like, my whole life changed, right? Because having watching what happened to Linda and seeing what was possible for her when she had a moca of two, well, then what's possible for everybody with a Moca of 19 and 20 and 25?

You know, we could especially when you I have seen so up close the suffering that comes with this like awful, torturous disease. There's a reason a lot of people don't want to talk about it before it happens, is because you want to just ignore that.

You don't want to even go there, right. And so it's awful. I mean, it's financially bankrupting. It's emotionally bankrupting. It's physically exhausting to care for someone with dementia.

And so if we could do what we did for Linda, but do it sooner, do it less expensively, put a little less effort in, but prevent this from happening. Yeah, like that changes the world.

Yeah. And people take for granted not of their own doing or fault, but what we're taught in terms of how do you what's your relationship with health care?

It's that I can do whatever I want. And when I break myself, the doctor will fix me and there's somebody else has to pay for it, right? I'm insured by an employee or whatever it may be.

In Canada, we have, you know, government, one single payer that pays everybody's bills. So that conversation, how do you speak to somebody about or what would you would tell people here in terms of waiting to do get the thing that your insurance company will cover?

Because how often do you hear from people that, oh, that sounds amazing. That's what I need. It's not covered by insurance. I'm not sure. Right. So how do you have that conversation with somebody who's not understanding that the thing that they don't want to pay a couple hundred dollars for, maybe the reason why they go literally bankrupt in 20 years.

And no, it's I mean, this is so challenging. And this is part of why I mentioned, right. Like the the way that we're solving problems in this reductionistic way, whether we're talking about the health care system as a whole or we're talking about the financial system or, you know, pharmaceutical companies and insurance companies and, the food industry.

I mean, like, you want to talk about root cause, right? Yeah. Let's go figure out, like, what we feed ourselves and what's available, what's inexpensive, what's subsidized, what's not right.

There are really big problems. And in society. Right? We're not making ourselves healthier. We're making ourselves sicker. And even just in how much we work, how much we overwork and what we're driven to do and how we spend our time.

And this these solutions, they require the wisdom and experience of our elders. And so that's another kind of piece of this that drives me is that we need them on our team helping us.

We can't just put them in elder living facilities, parked in front of TVs, eating cake and cookies. That does not bring them back into the fold, or keep them in the fold of society where they can contribute and, and so, you know, when we, it's so heartbreaking to me to have someone say, I can't afford this, and I want to get them, you know, I want to help as many people as we can.

Hormones, womenu2019s brain health, and testing

But I think focusing on the parts that are free, those foundational pieces and many of the things that are covered by insurance, like a sleep study, if you have sleep apnea and you have cognitive dysfunction, number one thing to do is treat the sleep apnea.

And that can be done through insurance. If changing your diet, it takes some effort and it takes, you know, new recipes and maybe a new grocery store going down different aisles, picking out different things.

It takes some effort, but that you're going gonna you got to eat. Right. So just changing what you eat will have a big impact. Making enough time for sleep, meditation.

It's free exercise. It's free. Those foundational pieces will do a lot of the heavy lifting. And then, you know, as as you work those things in, then hopefully, you know, if you if you have more earning potential because you're healthier and some of that can be invested back into, into this long term kind of health trajectory, and using the labs, using the tools that cost money. Yes.

But using those tools, in a, in a highly leveraged way. Yeah. We find that, so like everything you're talking about, the meditation and sleep and all these things, as you start to develop habits small and slow, it's the challenges when you try and flip everything overnight and just you're not going to be a different person when you wake up the next day.

So you implement these changes, and then you get to a point where all of a sudden you do become a new version of yourself and your identity is changed and you aren't that old person anymore.

And you understand that the way you prioritize your spending is also change it and it becomes intuitive, right? It's just part of who you are. But knowing that the months that it takes to get there versus the years of pain later, it's a very small trade off.

Right? So people, as long as you can understand that it's steps to get there and the day will come where you wake up and you're a different person, and then all of a sudden it's permanent.

You know, you when you were speaking of Linda, you made me think of something where, you know, one of her triggers was the mold, right? And the funny thing is that prior to talking to you, there was nothing else that triggered her to think about the mold.

And when you look at the United States, like regionally, there's certain cities that are like hotspots. I have a friend who actually works with us. He's a plastic surgeon that actually sells some of our tests.

Who says that Austin, where he lives, is a hotspot for mold. Right. So how many people don't. Sorry. Houston. New Orleans, at the places where there's been hurricanes and floods, actually, yeah.

So how many people entail. And it's kind of like what we're saying about health until something hurts, you don't go to the doctor to ask why, right? So how many people are living in mold?

Don't even know. And what should somebody do today to find out? Like, they may not even realize that there's little brain fog and pains and things that are happening that are going to turn into something worse later.

And it's a it's a simple fix, right? Yeah. So. Well, not always a simple fix, right? Living in a mold environment, it can mean move which is which which can be a lot, especially if you don't feel well.

And, and mold is, relatively ubiquitous, and some people are more sensitive to others. And so there's a, there's a spectrum of, you know, how intense you want to intervene.

And what I don't want to do is scare people about naturally occurring mold and suggest that we need our mold exposure to go to zero, that humans evolved on this planet, exposed to lots of mold.

What happens is when you're exposed to toxic mold or toxic, water damage, buildings. So as the building materials like drywall starts to decompose, there's a lot of chemicals in there.

There's also fungicides in the paints and in the in the building materials that then make the molds more toxic. And so if you are in a water damage building and you have the resources, get it dealt with right away, you know, do and certainly it Marama.

Right. Like we had a dishwasher that leaked. We had a gasket that came off the shower and then leaked into somebody's, downstairs, closet. And like, these are things we get on them immediately.

We do not cut corners. We do not worry about cost. We just repair out the drywall, replace it within 24 hours, make sure it's dried, you know, go back and look two, three, four weeks later.

Make sure that there's absolutely no mold growing. So be proactive is about this kind of thing. Understanding that it is a risk. And instead of, you know, going to like, no, it's not a risk at all.

But we see is, really insightful from the animal husbandry industry. Right. So there's a lot of financial incentives here, right? If you're a landlord and you own an apartment building or if you're, you know, you own a house and you have tenants in there and they're complaining about mold, you don't want to get sued.

You don't want to spend a lot of money replace replacing or getting or doing all this stuff. Right, because that there's financial repercussions from that.

If you are a if you are somebody who owns sheep or cows or chickens or horses or, you know, something that livestock that's, going to market and needs to be fertile and needs to be healthy, well, then you are highly incentivized to make sure that there are no mycotoxins in those animals.

And so this is like $1 trillion industry to get mycotoxins out of mammals that we then consume for whatever reason. But when we talk about humans, there's this big question mark.

Oh, well, maybe mold isn't that big of a deal. Maybe mycotoxins are not actually causing any sort of problem, but some steps. So step two is a medication that is used in rheumatology to suppress the immune system.

Well, it's a micro toxin just in a pill. Right. So we know we know is scientific certainty that cells up reduces in an

immune function. And that that micro toxin which we can measure in people is sometimes present.

And so we, you know, it depends who you're talking to and what the answer is, is what's convenient for them. From my perspective as a doctor who's ultimate responsibility and priority is is my patient's highest health, I think that reducing mold exposure and micro toxin exposure and then increasing our body's ability to get rid of those toxins is the highest priority.

And so there's some easy and free ways to do that. When I have a bowel movement every day, if you're not, talk to your doctor and figure it out that it's not healthy to be constipated, which is at least one down movement every 24 hours, and then drink plenty of good, high quality, filtered spring water that comes from glass, glass, stainless or ceramics, not from plastic.

Right. And so you get your kidneys flushing toxins out of your system. Make sure that you don't become dehydrated, because then you're not going to be able to flush things out.

Mold exposure, detoxification, and elimination

And then, your liver, so good liver, supportive foods, things like artichokes and beets and dandelions and arugula, those all of the leafy green veggies, eating plenty of garlic and onion that have those sulfur compounds that help you make good than just eating the rainbow of foods so that you have all of the nutrients that are necessary for you to properly detoxify, and then getting exercise and blood flow and sweating, dry skin brushing, balancing is really helpful for lymphatic movement.

And then breathwork detox breathwork. So again meditation can kind of overlap with doing really intentional breath work. This is why, you know, if a couple is over somebody they think is driving, they can give them a breathalyzer test.

Because exhale toxicity. We exhale toxins. And we can amplify that with certain techniques and and get rid of more toxins that way. And that might not specifically be a mold toxin.

But if we can reduce the total toxic burden in the body, then our cells function more efficiently. And, you know, you remind me of a clinician I once spoke to who literally her whole focus was getting people to have the proper and right volume of bowel movements, because she said her patients would come into her, you know, after having measured and found out that they had some heavy metal issue or some kind of toxicity in the blood, and then they would get on to a detox program, you know, and eating, changing their diet, whatever it was they were do supplements that they were taking.

And what she would say to them is, if you're not eliminating, where is it all going? Yeah, right. So you can take your supplements and, some kind of pill that says detox on it.

But if there's no movement, then what? Where is it going? Nothing's happening. Right. So, that's a key item where it's kind of like before you turn on the valve of flushing toxins, I'll make sure the the door is open.

Right. It's got nowhere to go. So, you know, with all this what you're doing, I'm sure that anyone listening is like, Well, I want to work with you. This is, you know, whether I.

Somebody in my family had or I'm trying to prevent it. So tell us about, you know, what your work looks like and what's coming up and where you're going to be.

What are we going to be doing with all this? Yeah, so we have. So Sarah is our clinic in San Diego, and the doctors here are all licensed in the state of California.

So if you're outside of California, we welcome you to come visit sunny San Diego and establish care with us here. And, or if you're in California, we can we can do that because we're licensed, here in the state.

And then we can get you said we have we have a wonderful team of well trained Rennison trained doctors. And, then at Miramar, if anyone is interested, has a loved one where they don't feel like they have the capacity to do it all at home.

Our Miramar facility is here in San Diego, and it's Marama experience.com. Kari is our director of operations over there, and she can walk you through the process and answer any questions.

And then, our Marama at Home program, if you just sign up for the email list on the Marama website, then you'll get emails about, what's coming there and how to access all of those educational materials.

Great. One thing I should ask you for everybody's benefit is, you know, you are pioneering this work. Like, if you go talk to 15, 20 doctors, it's unlikely that one of them will be able to speak to us the way you do.

Right? Because you've dove in and it's a passion and you know it, and you can help people and you've proven it already, like with actual metrics that you empirically measured and proven that numbers have changed, right?

So with all that you see and you know, these tools are real and you're kind of in the community of people that are doing it. How do you see this? You know, what does medicine look like in 5 or 10 years?

What does look like in 20 years? Where's it going? I love this conversation. Right. Because this is I feel like where like the people thinking about the iPhone in 1995, right.

Like, how do we reimagine aging and how do we create a compelling future around this? And I think it involves community. It involves engagement. It involves meaningful relationships, meaningful contribution, and we need our cognitive capacity for that.

And so I think all of us deciding collectively together that, like, we're not going to eat that crappy food, like what they sell in the 7-Eleven. Like, no, like that is not okay.

And that we need to have warning labels on McDonald's food and warning labels on Cokes like, this is where we are allowing. So like we've collectively we've said it's okay to to harm our environment and to harm our bodies by like the slow drip of toxins and creating foods that are not nutritious and by overwork and by, you know, creating social media that drives our brains, you know, it sets us up for depression and anxiety, which is associated with later dementia, overwork that prevents us from sleeping in us, which is us through our 30s and 40s, which is then sets us up for more dementia.

So if we can collective, we say like, hey, no, we're not, we will not tolerate this anymore. Then I think we like we start to imagine a future where we are healthier and we are living longer.

Clinic programs and the future of medicine

There is a gentleman, he's at Harvard, David Sinclair, right? Yeah. I'm sure you're familiar with his work, because a lot of that have to do with how do we how do we get the genome, how do we get our genetics to stay healthy so that we can live to 150 or even beyond, which is totally wild to think about.

But if we're going to do that, we need our health, our health and these foundational pieces and the way that we build our communities, our, this collective consciousness around what health means is pretty important.

Really important. That's awesome. I feel like you've reverse dimension. We just by listening to you for an hour because of the stimulation of my brain and all the neural connections developing to take all this in, it's awesome.

I this was really a blessing to be able to speak to, and for everyone listening, Doctor Sanders and Jenny, she's given you an ability to reach out to her and work with her if you'd like.

But dive in, get into the materials, read the books for the website, study, learn. Understand that this is not what we

think it is, that I don't want to know if Alzheimer's is coming, because I just rather enjoy my life and don't have anxiety for 20 years.

Know what you should know is that it's coming, meaning it's time to get to work and start working. How to prevent it? Because you can. If you can be two out of 30 on that skill and make a dent and an impact on that person.

If you're at 30 right now, let's just keep you there, right? That's what you were born. That was your sort of God given gift, right? That's what you were born with.

Not just keep it, maintain it, and with the science that you have, it's possible. Yeah, right. Highly possible. So thank you for joining. This is truly mine opening, eye opening, mind blowing.

And I hope everyone enjoyed it. Thank you. It's been such a pleasure. Thank you for having me.