Introduction and reunion

Welcome to this episode of the Mycotoxins and Chronic Illness Summit. I'm so happy today to have with us doctor Heather Sanderson. Doctor Sanderson and I went to school together about ten years ago last year, and 10 or 12 years later, we meet again.

And it's very exciting because we've followed very, very similar paths in medicine. In functional medicine, naturopathic medicine and complex chronic illness.

So I'm so excited to have you here with us today, Heather. She's the founder of So Fair Health Clinic, and Marama, the first residential care facility at of the elderly of its kind.

And, Heather, I'd love for you to tell tell the audience a little bit more about yourself and Marama. Oh, thanks. So good to see you. Always. And a pleasure to be included on this summit.

I created Marama after having pretty surprisingly good clinical experience with dementia residents. You know, you and I both, we were told by very well-meaning instructors at last year that there was really nothing that we could do for patients suffering with dementia, that we should tell them to get their affairs in order and never give them a false hope.

And then when I was trained by doctor Dale Bredesen, you know, many years later, I saw very quickly in my practice that we were good with. They were wrong and that, in fact, you could be reversing cognitive decline and pretty regularly if patients had the right support then and, and we did the right things.

If we got rid of the toxins, we got rid of the chronic infections. Many of the things that you're discussing here on this summit, if we could get rid of those things that were mucking up the system and put in the good support, the good nutritional support, everything that the cells, not only the human, the individual, but at the individual cells needed to optimally perform.

Marama residential care model

Then we could see a reversal of cognitive decline and improved cognitive function independence. You know, all of the things that we want, that we hope for and we sort of hide from and, assume that it'll never happen to us when we think about aging, all of those things that we can really have this optimal, 70th, you know, seventh and eighth and ninth decade.

So what I, what I sort of alluded to there was that in my clinical practice, the people who got better had support. They were able to implement a new diet, toxic detox protocols, getting in for IV, you know, doing all of the things that were necessary to get them to heal.

They were able to do it. And as you might imagine, someone with dementia, I mean, it's just hard to get your bills paid and stay on top of life, let alone take on all of these new lifestyle practices.

So I created Marama just in seen that those who couldn't implement didn't get the benefits. And Marama, the basic idea there is that the residential care facility where, patients can come and have an immersive, full experience of the breathing protocol.

So we include a key to an organic ketogenic diet, good, high quality filtered spring water. So there's not toxins in the, in the water, in the food, but also not in the environment.

So it's a nontoxic environment, everything from the mattresses to the linens or organic cotton. We also have, air

filters running because although we're not close to a freeway or a highway like many people are, we are in Southern California.

And there are things like wildfires that happen, things that we just can't control. And so we aim to keep that particulate out of the air. So that's not accumulating in, in our residents.

We also have really engaging and engaged staff. So we have our ratios are quite high. We have lots of staff per resident because anyone who's been around somebody with dementia knows that it's easy to get distracted, and it's easy for things to feel hard.

And that's a little bit of what we want, right? Like every time you do Sudoku, every time you do a puzzle, it's like it's like bicep curls for your brain.

We want that. But you don't always feel like doing it in the moment. And so having that engage staff that keeps people participating, it keeps people like on the bike going that extra minute, pushing a little bit harder.

That's where we really see the benefits. We also have a garden on site. The basic four pillars. The way that I typically describe it is a nontoxic environment, a ketogenic diet, an organic ketogenic diet.

So the kitchen and we reflect off keto. Sometimes it's not appropriate for everyone to stay there forever. But, the kitchen, the environment, the activities.

So we have, we call it the casita or the, our routine or our, circuit. In the casita, we have red light therapies. Excuse me. Contrast oxygen therapies, a rowing machine, a bike as the patients go on long walks and, accompanied by caregivers, keeping them going again, keeping them motivated.

And then, we have what else is down there? There's a biomed. We just have I think you guys also have, like a room full of devices. A room full of devices is admirable, and all the residents use it 5 to 6 days a week, and then the fourth pillar of Marama is our staff.

Just being really well trained to know how to redirect someone and also to expect them to get better. Often times, you know, as humans we will rise to the occasion, right?

So when if someone expects us to do really well, if someone expects us to heal, then we do. And typically when someone moves into a residential care facility, they go downhill.

And part of this is because, you know, there's a change in environment and our residents, when they move in, there's usually about 3 or 4 weeks of adjustment where it's a little rough.

But when someone moves into conventional memory care or senior living, there's often cake and cookies and pasta for dinner and cereal for breakfast and a sandwich for lunch.

And this is the antithesis of a brain healthy diet, right? We want vegetables and good fats and good proteins, and that is really what our brain needs in order to heal.

And so when our, our staff now, they've seen, many residents go through this process and they watch them learn to remember names like learned to write again, you know, really phenomenal and, and miraculous things happen over there.

And having the staff expect that is, I think, a big part, a big key to the sort of what unlocks this potential. I love that you bring up so many important points.

So first of all, the expectation when when human beings are like this, right? When somebody has that expectation of us, someone else believes in us, we begin to believe in ourselves.

Even if the person doesn't have the cognition.

Beyond lifestyle: toxins, nutrients, and structure

To be able to think about that, there's something, something in the spirit that recognizes that and does rise to the occasion. I've seen that so many times.

It's so, so beautiful. Whether it's regarding cognitive decline or or anything really. I find when somebody when somebody believes in us, we we we do we we rise to that.

The other thing is about diet. It's so true, right? Even in hospitals, when people are trying to heal, they're given mac and cheese and gluten and sugar and all kinds of inflammatory foods and, and of course, the foods that, that affect brain inflammation.

So I'm just so happy to know that Marana, Maremma is doing the opposite. You're bringing people nutrient dense food, anti-inflammatory foods, foods, foods that are going to help set the foundation for everything else you're going to do for cognitive decline, for for the patients.

Most people think that including, as you mentioned. Our teachers from our past. So not only in, in general, naturopathic general functional medicine, general primary care in general.

You know, people think that if you have enough sleep or and diet and stress is is managed, you know that there shouldn't be cognitive decline. I've got my diet right.

I'm eating paleo or the Mediterranean diet. And I have all these techniques to manage my stress. I meditate or I do acupuncture or I have therapists or I have healers.

I've done all the right things. Why am I still why why do I still have this brain fog? What's going on? So what I want to bring to light today with you is that it's not just about diet and lifestyle.

There's so much more. And I know that that clinically, we both work on this. And I know that you're bringing this to your clients. And, Marama, let's talk let's talk more about that beyond beyond diet lifestyle stress.

Yeah. So Marama was an answer to the lifestyle piece of it. So it Marama, we are by definition residential, not medical. And then it so Sara. So say is the clinic that I founded.

And this is where we do these deep dives into the why. And you mentioned that it's like, oh wait, I've been doing the lifestyle right. I've been doing everything they told me.

Why do I still suffer? And so when I do think there's an 8020 here, though, and I will say there's lots of people that don't need me, right. They can just get the book and they can live the lifestyle at home.

And, and many people actually show up in the clinic after having done that important benefit. But they want more, they want optimization. And so this is what we can do on the clinical side.

This is is really diving deep into okay, what and I'd like to get structure in here. Right. Because it can very quickly feel overwhelming. Right. So first I start with toxins because of toxins are in the way they are going to mess up cell function, mitochondrial function.

They are going to deplete you of nutrients because you have to, you have to sort of like switch gears and focus on getting the mercury out or the mycotoxins out or the chemicals out instead of focusing on growing.

Right. If we are the way Doctor Benson says it. So well, the key says, like, if you if it's your my brain is stun, right. And think of your brain as a country.

If your brain is putting resources into fighting something off or cleaning something up, then it's not able to put resources into growing and learning and thriving and building and creating.

And so what we want to do is shift the the signaling. We want to shift the whole pattern from that, that defensive or threatened or fighting kind of perspective to the growing and thriving.

And so the way we do this, again, it's very, it's very sequential. So we start with toxins. We figure out what are the toxins there. And I think of them in three flavors.

So mycotoxins I know you're talking a ton about I have had the pleasure of working with the doctor, Neil Nathan, for a long time, and then also learning from Richie Shoemaker, and then, of course, learning from all of my incredible, brave, inspiring patients, for over many years and watching what works and what doesn't for them.

So my go toxins are a really big deal, and I talk about them first with dementia, because I think that they I would say from my perspective, they are one of the easiest to treat and the most like underdiagnosed issue that comes up with dementia.

But if you live in a moldy home and you've been exposed to mycotoxins and you have brain fog or cognitive decline, this is an easy, quick, simple place to start.

And then I want to know is there is there heavy metals? Are there heavy metals. So mercury is ten times more neurotoxic. And lead mercury is one of those really, really big ones.

And in this day and age, you know, with the patients I am seeing, they have a significant mercury exposure. Lead lead is mostly a thing of the past. I see this in my elderly patients, of course, and then people who lived overseas where leaded fuel was still a thing into the 80s and even sometimes into the 90s.

That was still an issue. Leaded paint as well. But in the US, most people who, you know, didn't spend a ton of their time being exposed. It is they're doing okay for lead.

Now, that's not 100% of the time, but for the most part, Mercury, on the other hand, there's more of it in the fish and the the metal amalgams. People get such mixed information.

And about that, I see it over and over again. If they're amalgams in your mouth, I recommend getting them out again. Mercury is so directly toxic to the brain and Mad Hatter's disease.

For anybody that isn't familiar with that. The hatters used to use, mercury with the felted hat and it would drive them crazy, drive them to suicidality, depression, anxiety, which of course is rampant in our society.

And if Mercury is part of the issue, we want to know about it and get rid of it. Yeah. So I want to talk a little bit about mycotoxins and metals. Oh yeah, I, I'm so glad you bring up these topics together because so often I'm seeing them together.

So we know that mycotoxins can affect the brain in so many ways. Right. They induce mitochondrial dysfunction, which, you know, has been found to be connected with cognitive impairment.

Mycotoxins interact with the neuro immune axis, which is the axis where there's certain signals, signaling molecules that link the immune system with the central nervous system.

So now we've got mycotoxins activating this axis, activating along this axis, triggering mast cell activation syndrome, causing cytokine flares. Right.

And then they impair, neuronal plasticity. So now people have issues with learning and if memory and they compromise the integrity with the blood brain barrier.

So we've got that. And then we have very often mold in the sinuses creating mycotoxins as well. Again they can cross the blood brain barrier and cause inflammation.

So we've got mycotoxins and molds which can directly affect the brain in all of these ways. And you're so right, Heather. It's one of the easiest things to treat and one of the most overlooked.

That's the can they know. Okay, yeah, people aren't thinking. Most functional medicine doctors are not yet thinking they're going to be soon. I think about about the sinuses, brain toxins.

Yeah. Let alone conventional doctors, which is where most people are being seen for brain fog and low energy and cognitive decline. Exactly. And then as far as metals go, I'm seeing a lot more mercury in people also, particularly since the fires in California.

I'm talking about like my patients from California, more mercury. But I'm also seeing more arson in Sonic. Yeah. And aluminum is now. And so I'll test their metals in their blood, in their urine, unprovoked.

First just go to lab poor, get those tests done. And then in the past I'd say, okay, do a fish bass now and and let's retest. And then one month later after a month on fish bass they come and the mercury levels are lower.

Nowadays, even after fish test. I'm not coming down. No or yeah I, I really like the AMD product from Quicksilver. I see that work really really well.

And so that's what I use. It's quite accessible. We used to use evacuation. I have it just moved away from it a bit because I had the AMD powder working quite well for people. It's easy to do at home.

It's risk free. It's really affordable, especially compared to weekly IVs. And so, you know, I think that's the other piece with looking at Mercury when the potential risk is so high and it's relatively simple to get rid of.

I do recommend also avoiding especially tuna ahi, swordfish shark. Of course, any of those big pelagic predators are going to concentrate that mercury up the food chain. So I did I did some testing on patients with mercury and eating only salmon.

So just testing in the clinic with about ten patients, that's not a real clinical trial, but just some just some clinical pearls I was looking for. So I had people eat salmon twice a week for a month, test their mercury, and then stop eating salmon for a month, test the mercury.

This was this was before, the what it was between fire seasons actually. And I noticed that even with only salmon, mercury came down a salmon supposed to be a fish that's not supposed to be very high in mercury.

So I'm telling people, you know.

Mycotoxins, metals, and detox strategies

Try even salmon has a little bit in it. You know, that's so demoralizing. I know now, even even though I also just said I'm not seeing the mercury levels come down so much after after stopping fish at all.

It's because it's everywhere now, right? It's so ubiquitous. Yeah. And this is why I think a lot of these naturopathic ideas and tenets of and just healthy everyday detox.

Right. Making sure you're sweating. And this is why exercise is so critical. Drinking enough clean filtered spring water, getting enough, you know, like getting some vibration or someone static movement, maybe a massage, something to just keep things moving.

It's so important. One thing I noticed is having a bowel movement every day. I agree that sometimes we try to detox people, but they're just not ready for any at all.

We have to do what I call a pretax, support the system, get them ready for detox. I like to begin with detox first as well, but but with our patients, they're not necessarily coming to us only for a cognitive decline, but they're coming for, for for, complex chronic illness, meaning tick borne disease, mold, mycotoxins, autoimmune conditions, chronic fatigue syndrome, fibromyalgia, those illnesses, what they're coming to us for.

But there is cognitive decline along with it. Probably not. Not as deep as in your patients, Heather. But our patients are having brain fog along with all these other illnesses that they come to us with.

You know, and, yeah, well, you know, the lines spirit keeps, I think, when we talk about infection. So I stay with toxins. And I again, I think of them in three flavors mycotoxins, heavy metals and then chemical toxins.

Yeah. We yeah. And then we want to understand nutrients and not just like okay. Do you are you so vitamin C deficient. You have scurvy or do you have so much sugar you have diabetes.

But what is your methyl B12 level. What is your homocysteine level. Do you have enough to functionally be able to metabolize the crap coming in and the good stuff coming in, and then get rid of the excess?

Can you get rid of what doesn't serve you efficiently so that you can keep optimal cell function? So nutrients we want to understand, but not from like an RDA like a recommended daily allowance perspective, but from a from a functional optimal, kind of perspective.

So toxins and then nutrients structural issues can be an issue. So in terms of how I organize myself, right. If and I think a lot about cognitive function.

But I like you, I think, you know, this is sort of the brain. You can't separate, you can't cut the head off. Right. Like the brain is that separate from everything else.

So we're treating the whole body and and I would say that dementia is just one of these complex kind of conditions that we can use this, this same structure for the same model for in terms of figuring out what's going on.

So toxins, nutrients and then structure, you need enough blood going to the brain. You need enough blood coming out of it. And this includes all of the signaling hormones right.

So I, the hypothalamus and hypothalamus and pituitary, they send signals to our thyroid, our adrenals, our ovaries, our testes, our to our pancreas, to all of our, our glands.

And then also the nervous connection that we, we need to be able to get that signal from our, the tips of our toes up to our brains and so if those things aren't happening because our next instinct or our posture is really off, then that is going to inhibit good information.

Getting both in and out. And then so toxins, nutrients, structure, stress. We all know someone who has gotten sick from stress. We've all been stressed and known that that is probably been part of what made us sick.

So understanding our relationship with stress, we we all have it and we've probably, I'm sure you've seen heartbreaking situations happen to someone who leaves a parent or whatever, but they lose a child.

And watching two people go through relatively similar situations, and one person makes it like their life's purpose to make that the best thing that ever happened to them, no matter how horrific it was, and the other person just crumbles under it.

And we want to be that resilient person that that our relationship with stress is something transformational, that it's something that that we see as a gift at some point versus something that just crushes us.

And whether that that manifests as a chronic illness or something else. And then lastly, I put in sections. So I know you've already mentioned Lyme in the context of dementia.

Lyme spirit keeps come when when you dissect, dissect the brain of someone with dementia. Lyme spirit keeps her associated with beta amyloid plaques, as is herpes simplex, as is, the parent of Alice.

So oral health is really critical in terms of dementia. But really, I mean, health starts in the gut and the gut starts in the mouth. That's great. Cannot overlook oral health.

But with dementia, gingival is one of the the bacteria that gets into habitations, into abscesses, into root canals that I think because of the proximity, anatomically they're their neighbors.

But also, just because that happens to trigger more inflammation in the brain, this is a really important one. As as Lyme, like you've already mentioned.

And the sinus infections, again, proximity allows for a lot of exchange between the brain and the sinuses. And we don't have that same blood brain barrier when things are kind of crawling up the olfactory nerve.

And so really, really important to be aggressively treating those things, not to aggressively to push anybody over the edge. Yeah. I mean, with a great doctor like yourself who can say, okay, here are the stats.

Let's do this in a way that's healthy and sustainable for you. And let's get to a finish line. Absolutely. And the structural integrity piece is super important.

I love that you bring that up. So a lot of our patients we know are having CCI cranial cervical instability. They have Ehlers-Danlos syndrome. Or they've got some some version of something like it a lot of hyper flexibility.

And so we include that as part of the stretch and integrity in addition to, to anything else that's out of alignment. But what we also know is that cell activation syndrome also worsens issues with with lax ligaments.

And so the mast cells send out histamine in a repertoire of a thousand other chemicals. Right now, those chemicals are they're important when we're under a stress.

So there's the initial stress reaction. Our body's our body's response to it. It's important. Inflammation is an important part of the healing response.

But we get stuck in a pattern of inflammation or stuck in a pattern of our mast cells sending out a thousand chemicals, not just histamine. And, well, those chemicals tenderize the ligaments.

They tenderize the brainstem and so that's what makes our patients even sick. And we know meth cells exist in the brain as well. So I notice that once I treat mast cells, in fact, that's one of the things I treat first as well.

While I'm doing detoxification, their pain changes. They do begin to, have I have a better memory. They're the cotton wool that they feel is in their brain.

Begins to come down, or. Yeah. So it's a it's important and there's so many ways to, to address the structural integrity by treating mast cells, by having body work done, having healing work done.

And, as we send people to, to a functional neurologic chiropractor as well, who I'm going to be interviewing later on. That's very helpful. Very helpful. Yeah, yeah, yeah.

Infections, mast cells, and resilience

And then and then the infections not just tick borne disease, not just mold, but like you're saying, viruses. Parasites are a big one, I'm finding. So of course there's that gut brain connection that's very, very important as it comes to as it relates to parasites.

Fungus is in the gut, other infections in the gut and then the infections in the sinuses. So we've got this whole,

conglomeration of, of of bugs and tadpoles that we're looking for in addition to the structural integrity, integrity and how it all manifests with respect to epigenetics and biochemical expression and just what the individual's tendencies are.

There's certain things I tell my patients, you know, I can't measure this in a lab. Like, I can measure your genes, I can measure your biochemicals, I can measure your nutrients status, your toxins.

But I can't measure your will. I can't measure your resilience. Most of my patients are are resilient. They have so much will. They're so inspiring. They they go through these treatment plans that are hard, that can be like a full time job because they're so sick.

And so to speak back to what you were talking about, having that resilience sounds so creaky and that that I feel like it's kind of my job to help and guide that patient into having more resilient.

That's the same, that we're going in the right direction. Right? It's not it's not just that hemoglobin AMC number. It's not just those Lyme labs. It's it's that ability to respond to the environment because that's what's lasting.

And that that could be even a definition for health is like how adaptable are you? How flexible are you in the face of stressors from the environment?

If it's hot, if it's cold, do you have tolerance to that? If if you fast for a couple of days, do you have tolerance to that? And so these this really is ultimately the goal.

And I think that's also again that that's the path or the key towards a longer healthier life. Absolutely. Let's talk about a comprehensive approach to cognitive decline.

Tell us about about your treatment plans. Yeah. So that was a little bit of what I was describing is like this model that what we do is they say, okay, let's measure the degree of toxicity.

That's measured where your nutrients are. Let's measure you mentioned pets. Like let's understand what's going on with your gut. Because, you know, the sad part is that we ever disconnected the gut in the brain, right?

I you know, yeah, we all talk about the brain connection, but we're like, wait a minute. Like our hipbone so connected to our leg, but like, everything is still interconnected.

I like the energy of, you know, when Eric, Doctor Gordon was saying to a patient, and I love it, I take it with me. It's not, it's not. We're not a salad.

Like, here's a here's a tomato, here's some lettuce, here's some avocado and some cucumber. The body doesn't see it like a salad, but it's more a soup.

And so that our whole whole body sees it as a soup, it's connected. The inflammatory cytokines from here come from there. I'm just pointing to my gut right now or from lymph?

Lymphatic. Clogging, clogging over here. So it's all it's all connected. But but we humans need to put things into categories. So we say okay, that's the brain.

And and it functions on its own. And here's the thyroid. It functions on its own. So go. So the analogy is the thyroid. Go see a cognitive expert who focuses only on the brain only on the brain.

Right. Whereas the approach is is whole body integral. And that's where we see the changes. Yeah, definitely. And I think that part of the reason why conventional medicine has gotten it so wrong in the case of dementia is, of course, there's lots of different paths that we can take to that same diagnosis because the diagnosis really just describes the symptoms.

It doesn't tell us about the why. And so again, this just goes back to the model. And this is why I was so attracted to Doctor Renaissance work is that he says he he's like unapologetic.

You don't need to just look at hormones. You need to look at toxins and nutrients and hormones and infection. Like, if we're going to have a reasonable conversation, if we have a reasonable chance at fighting this impossible disease, this absolutely awful disease, and the ones that you've listed as well, right?

This is all part of that continuum of complex chronic conditions that are very much lifestyle mediated. But then like when things get out of balance, it starts to perpetuate, right?

Like when when there is that toxic burden, like a cell set, for example, and you were talking about mycotoxins and all of the impacts that they have. But micro phenolic acid is one that's easy to test, right.

We can get this on a Great Plains lab, and that is actually a medication that they put into a pill called Cell Sect. And it's used for autoimmune diseases to suppress to aggressively suppress the immune system.

So in small amounts a lot of these toxins, as they build up, they start to suppress the immune system. And then you have infections that maybe in your 20s you could have fought off.

Maybe if you weren't under so much stress, if you weren't juggling two jobs and three kids and whatever, and a divorce or whatever it was, you know, if if you didn't have the toxic burden and you didn't have the stress, then if you had been exposed to a couple of parasites, you would have been okay.

But here we are, and you know, you're going through menopause and it's not okay anymore. We've got to give you to give you a fighting chance. We need to look at the whole landscape and understand what are all the things you're fighting.

Let's get rid of them and then support with all of the other great interventions, whether it's creating sacral therapy like you mentioned, like bodywork and calming the nervous system, whether it's suppressing Marcel's for a little while, while we get that neuro reprograming done.

All of those things are just really critical. And it sounds like you guys do. I mean, obviously you guys do a phenomenal job putting these things in the right order, making sure that you're not detoxifying too quickly at the beginning, doing what a patient is capable of and what's going to work for them, and making sure that they're supported the whole way through process.

Yeah, it's very, very important. I tell my patients I'm watching like a hawk monitoring you. We're on this journey together. I'm not just telling you here, do all these things and then you're going to do them.

No, we're we're in this together because there are so many steps in timing. It's critical that if you do one thing before another, it can backfire. And so we have to understanding, understand the timing for each patient.

Usually there's a tempo I want to I want to start to bring inflammation down. First I want to start to to work on an immune immune modulation first. So I'm doing that with peptide therapies.

If they're really sick, I'm not even going to detoxification yet. I'm beginning to work on structural integrity, neuroplasticity and then coming in and detoxifying and re layering all these treatments together.

And I'm going to come in and start to treat infections. A lot of times people are going to want to treat the infections right away. And I say if we do that, I've seen from experience you're not quite ready for that.

And the patient says, oh yeah, that's true.

Comprehensive treatment timing and research on dementia

I'm not I know I'm not ready to kill infections just yet because we have we have to prepare you for that, get you ready for that arm, you for that. It takes a lot of work on the patient's part, on my part.

But at the end of the day, when people are better, they're so happy they did it. And then they have this, they see this, the silver lining. Like, you know what?

That was the best thing that ever happened to me. It was so horrible while I was sick. But but now I'm I'm a better human being and I'm more productive than when I first began.

And I much better understanding of their bodies, how they work, what health really means. Absolutely. Yeah. Tell us about the state of research on dementia.

Yeah. Great question. So what how typically happen. So there's sort of this triangle if you will, and the penultimate sort of best studies. What most people will point to is a double blind placebo controlled trial of usually one intervention.

A single molecule is really best because that can be packaged and patented. And then there's a drug company that can make a bunch of money off of it. So obviously this approach is not conducive to a double blind, placebo controlled trial of something that can be patented.

This is very much a lifestyle approach. It's very integrative, it's very individualized. And so until about four years ago, the IRBs, these are the internal review boards who basically approve human research studies.

This comes out of a long history of people, basically prisoners and and people of color being taken advantage of and used as human research subjects without their consent.

And so this is very important. I'm really glad that IRBs do this. But they basically their their job is to make sure that any human subjects in a trial are treated fairly, that they're fully consented, they're fully informed when they decide to join a trial.

And so the IRB is until just a handful of years ago, they would not approve trials that had this many variables. And so it was just, literally like 4 or 5 years ago that Doctor Bateson got a trial approved.

And then I was very fortunate to get a grant, to study another 25 participants. They studied 25 participants. And, they published last June, and then we'll probably be about one year behind them.

Covid slowed everything down, but we'll get another 25 participants out there. And these are feasibility trials. So there was no control group. And of course, when you're asking people to change their diet, to start exercising, to take a bunch of supplements to, you know, manage their stressors, maybe see a therapist or get a health coach, all of these things.

You can't blind this. You cannot you can't fully control this. But the feasibility studies showed us that, yes, in fact, people will do it. And a doctor Reticence trial was published, like I mentioned in June, and 74% of participants in his trial doing what I'm describing here today reversed their cognitive decline.

So Doctor Bateson took an their child catsuits, and they're actually up in the Bay area, very close to Anne Hathaway, Burton and the tubes, all working with Doctor Bateson.

They were the clinicians, the three the three doctors were, Anne Hathaway, Kat Tubes and Deb Gordon, where the three clinicians who saw patients and then Doctor Bateson was kind of overseeing the whole trial.

So, they again, feasibility trial, we see that it can work. And even and they were also doing their trial during Covid at the beginning of Covid. So people are interested, they are capable, they are willing to do the work that it takes to reverse dementia.

And it can we can get it to happen. 76, 74%. It's about 75% of the time I love there's number to that, I love it, I love it because we see it happen and there's research now.

So that was the problem. Before I would have patients come into my office or the daughter, the center, the spouse and say, hey, look, this is a lot of money and this is a lot of time and effort.

If I'm going to do this, how likely is it that my loved one is going to get better? And I didn't have an answer. So that was why I was so excited to do the trial in my office.

And we'll publish the results. And this year and that, that'll be really fun and exciting. And then the next step and Doctor Bateson is already started.

This is a controlled trial as controlled as we can get. But essentially what it be I believe that they're doing 100 participant trial. And I think they have five sites and they are taking, a subset.

They will just follow the the natural history of the disease. So they won't be doing all the testing that we've discussed. They won't be looking for toxins.

They'll they'll do some intervention, some education probably around. I don't know exactly their trial design, but certainly as we're looking at our follow up trial, what we'll want to do is give people at least education.

I think ethically, I wouldn't be able to enroll people. And then say, just get on the conventional drugs and scan urologists. Like, we know there's so much that you can do.

That's what you would really want to support people in, in at least the lifestyle pieces, and maybe leave out the medical pieces as the control. So I'm sure doctor is doing something like that.

And what it would be nice for all of the participants is after they do about 6 or 9 months, they'll be on a crossover. So they'll go into the active, study group.

So, they won't be in the control anymore, and they'll get the benefit of all of the testing, all of the treatments, all of the interventions. So I'm really looking forward to seeing what that looks like.

And I hope that this type of trial, you know, very much patient centered outcomes we are looking for, we're not looking for changes in the amount of beta amyloid plaque, because that has not been shown to help with cognitive function.

So you can reduce beta amyloid plaques. And that typically if you have a drug the drugs do that. They do that effectively. But typically when you do that the cognitive function gets worse.

There's even a Jama paper showing from, I think, 2019, that shows that Aricept and the Minda people who are on them actually have work cognitive function.

So the best drugs out there that you might get from a neurologist or primary care provider, they actually even though they're prescribed for people with dementia, they make cognitive decline worse.

So now have you had I don't think people know that. So people don't know that you have to go really fast. I want to say, do not come off of yours if you're on that.

Because what happens is it's a precipitous decline. So when you have those inhibitors in the system you do not want, it's like going cold turkey off of a benzo.

You you don't want it really going to disrupt the neurotransmitters. So even though I don't recommend that patients get on them, I also don't recommend that they get off.

So I just want to be clear about that before anybody goes and stops taking theirs. That's that's really important. I just want to reiterate that, and also that we're not giving medical advice here at all.

Okay. But but we're giving information for you to go and take that to your doctor. So if you do have cognitive decline and you're not yet on a medication, you want to ask your doctor to consider other methods, such as what we've talked, what we've talked about here.

You probably need to find us or someone like us to help you with that. Right. And and just to reiterate what the doctor, Heather was saying, if you are on a medication for, for Alzheimer's or on an SSRI, please, please do not yank yourself off of that if you want to come.

Right? No. Very important to work with your doctor. Everybody's a little bit different. And, and really the literature is out there. Right? So what I would encourage more than anything is go in armed with the information and then have the conversation with your doctor exactly, exactly.

Well thank you. Thank you Heather. Of course. It's always such a pleasure. Yeah, always. And so happy you joined us. Thank you.