



**EPISODE 804**

# **Proof That Alzheimer's Disease & Dementia Can Be Reversed**

**With Guest Dr. Dale Bredesen**

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**SHAWN STEVENSON:** This is one of the most important episodes that we've ever done. Today we're going to be addressing one of the most important health issues of our time. Right now in the United States, we have about 330 million people living in the U. S. If this issue is not addressed, 40 million of the people currently living in the United States are going to pass away from what is now inching its way into the leading five causes of death and that issue is Alzheimer's and dementia. As a matter of fact, this issue is so important. We're going to do something exceptional.

We've never done this before. We're going to do a dementia awareness week. The episodes of the model health show this week are going to be dedicated to this issue. And today we have the foremost expert on this subject matter who has clinical trials, published data affirming that not only can we stop this issue in its tracks because that was the approach of conventional medicine to try to slow the progression of the disease. We can stop this issue and we've got, now, peer reviewed data, mountains of data coming in that dementia and Alzheimer's can be reversed. Now, we want to tune in and listen with an open heart and open mind and get this information in and share this with the people that you care about because the rates are continuing to climb.

And today we're going to actually peel back the curtain and look at number one, let's check in and see where we are currently at as far as Alzheimer's and dementia in our society. And what are the projections looking like. Number two, what is Alzheimer's at its core? What is actually going on behind the scenes that is creating the manifestation of the symptoms that we see and getting placed with this diagnosis of Alzheimer's and dementia? What is this disease really? And most importantly, we're going to start talking about some of the solutions. We're going to look at root causes. And please notice that was a plural. It's not the root cause, root causes of our growing epidemic of Alzheimer's and dementia. So this episode is, the first this week, dedicated to this very important topic.

And you are going to be hearing here first, many of these different aspects of Alzheimer's and dementia that you're going to be hearing about years from now. But for many of us, for many people, you're going to be hearing it here first. And I'm so excited to be able to share this information. So let's get to our special guest, Dr. Dale Bredesen. Dale Bredesen MD is an internationally recognized neurologist with specialty expertise in the mechanisms of neurodegenerative diseases. He's the senior director of precision brain health at Pacific Neuroscience Institute and the chief scientific officer at Apollo Health.

Dr. Bredesen earned his medical degree from Duke University Medical Center and served as Chief Resident in Neurology at the University of California, San Francisco. Before joining Nobel Laureate Stanley Prusiner's Lab at UCSF as an NIH Postdoctoral Fellow. With over 30 patents to his name, Dr. Bredesen has contributed significantly to medical knowledge and literature. And notably he's put much of his findings and research into his New York times, bestselling book, the end of Alzheimer's. And now we have him here to illuminate this topic of Alzheimer's and dementia. Let's dive into this conversation with the amazing, Dr. Dale Bredesen.

Thank you so much for coming to hang out with us. This is phenomenal. We've been trying to make this happen for a little while now and I'm very excited to have you on. I've spent a lot of time in your universe studying your work. I was just analyzing some of the Peer reviewed studies that you've done as well. So many incredible things are happening, but I don't think a lot of people are aware of this right now. And today is really a masterclass on Alzheimer's, on dementia. And if you could, can you start off by sharing what our current state is with Alzheimer's, we know that it's gone up precipitously in recent decades, but it's now one of the leading causes of death.

**DR. DALE BREDESEN:** Yes.

**SHAWN STEVENSON:** So can you share where we are with that? And also where the projections are for Alzheimer's if we don't do something radical about it?

**DR. DALE BREDESEN:** Yeah, this is a huge problem. And so I'm glad you mentioned that. So people often talk about the fact that there were over 1 million Americans who've died from the pandemic. 45 million of the currently living Americans are slated to die of Alzheimer's disease if we don't do better with prevention and treatment. It is a huge problem. It is now the number two cause of death in the UK. And depending on where you look in the U. S. It is more common in women. So about two thirds of the patients are women, about one third are men. But it is a, some people say it's the number five killer, number six killer.

It's right in there as one of the top several killers, unfortunately. And it's the most expensive because you end up having home nursing care, home care, all this sort of stuff. The average American will spend 350, 000 before dying of Alzheimer's. A lot of that at a nursing home. And our argument is that with what we now know, this really should be optional, very few people should get this. I tell our daughters you are in the first generation that does not have to worry about Alzheimer's disease. Because for my generation, the old guys, this was a huge problem. This was the biggest concern. It was past cancer about 15 years ago is the biggest concern for people of my generation.

So unfortunately, mainstream medicine has everything backward right now. And this is where getting the word out to your listeners and viewers really a good thing because there's so much that can be done. So if you go into your doctor today and say, I'm having trouble with my cognition, your doctor will say, number one, it's probably not Alzheimer's. Don't worry about it. One of my least favorite terms lately is reassurance. Because you get reassurance, but it's false reassurance. One of the most common things I hear from people who have actually developed Alzheimer's, I say to them didn't you tell your doctor ten years ago when this was first starting?

And they say, yeah, and he or she told me that it's just normal aging. This is not normal aging. When you're starting to have trouble with remembering things, you're starting to have trouble recognizing faces, you're starting to have trouble with your navigation, starting to have trouble with your word finding with simple calculations, drive, all this sort of stuff. When these things start to give you a problem, something is wrong. And when you actually develop Alzheimer related dementia, which there are over 7 million Americans who have this now, very common problem we're looking at by 2050 somewhere around 15 million. It's breaking the bank. That's the big problem.

This is a trillion dollar global problem. And when you're developing this, you go through four phases. So phase one, you actually feel fine. You're asymptomatic. You don't realize something's wrong, but you can actually pick this up already on PET scans, spinal fluid. And the great news is there's a new test, P-TAU 217. So P hyphen TAU 217. This will tell you, it's a little bit like looking for whether you've got insulin resistance long before you ever have type two diabetes. This looks at whether your brain signaling is tending toward Alzheimer's long before you ever actually have Alzheimer's. So it's a really important test. But you have this phase where you're asymptomatic. And then you have the second phase, and that's called SCI, Subjective Cognitive Impairment. And on average, that lasts about 10 years. It's where you know something's not quite right. You're not coming up with names the way, you're not remembering phone numbers the way you used to, but your doctor says, Oh, it's probably okay. You're just, you're a little, you're a little older now.

That's absolutely wrong because in fact this is the second stage of what's going to become dementia in the future. After those, about 10 years you then develop MCI, mild cognitive impairment. And I have to say it's a terrible choice of words for mild cognitive impairment because as one patient said to me, "there's nothing mild about it". It's like telling someone, don't worry, you only have mildly metastatic cancer. It's a relatively late stage of what's going to become Alzheimer related dementia. Now by definition, when you have MCI, what that means is you are now starting to struggle with cognitive tests. When you have SCI, you can still score normally on the cognitive test, but you just know something's not quite right.

Yeah. With MCI, you're also scoring abnormally, but you can still take care of yourself. The fourth and final phase is dementia. And of course, and that's where you're now struggling with activities and daily living. You can't balance your checkbook. You may have trouble with your driving. You may have trouble with even ultimately remembering, when to shower and things like that and how to shower even, things like that. So this is why we get in early. Nobody has to get this, virtually nobody. And now we've got better tests. We've got a lot we can do about it. Virtually everybody with S. C. I. Can be turned around. We described the first reversals of cognitive decline published this way back in 2014. We're seeing hundreds and even now thousands of people. But the later you wait, the harder it is to get a complete return.

**SHAWN STEVENSON:** Yeah, this is so fast. You just said 2014, that's 10 years ago. And still this information has not permeated conventional medicine. And this is part of the process of what you're doing right now. You're getting out and educating right because it's largely considered to be once the onset happens. All you can do is, maybe, slow the progression but being very unsuccessful even that. And to have the audacity and the data to affirm not just slow down this condition, but to actually be able to reverse it is I mean, it's just, it's groundbreaking.

**DR. DALE BREDESEN:** We're excited about it. Yeah. The first, the very first patient that happened eventually called me at home on a Saturday, and I turned to my wife and I said, here we've been working with transgenic mice, Alzheimer's and even fruit flies, alts fliers, all this for years. And then to see that, yeah, you can actually make a difference in a human was so exciting. I said to my wife, we were on the right track all those years. And now we're finally seeing it. Now we've seen it in hundreds and thousands of people.

So it is very exciting. And we just want to now increase this, increase awareness, get people to get on active prevention. We recommend that everyone, I used to say everyone who's 40 or over, now I'm tending more toward 35. And I'll tell you why. A study came out two weeks ago that was Really concerning. What they did was they took people and they were trying to see whether exercise would make their memory better. So they would give them some things to remember, then they would have some group exercise, some group not exercise, and they would check at the end, did your exercise help your memory.

When they were doing this test, they split people up into two groups. One group is with ApoE4 negative. So people who didn't have ApoE4, which is the most common Alzheimer related gene. They thought, okay, we better split those because we don't know. Even though these people were 18 to 25 years old, the group that was ApoE4 then, they did the same thing. It turned out that the ones that were ApoE4 positive, scored more poorly.

At the ages of 18 to 25 than the ones who were ApoE4 negative. So it tells you this process is going on what we used to think of as "old timers disease". It's going on in your 20s and 30s. You just don't get diagnosed until your 50s and 60s. And by the way, the epidemiologists have also shown us there are, if you look at where the diagnosis of Alzheimer's is really, and this is people farther along, really going up. It's in the 40 somethings and 50 somethings. It's not in the sixties and seventies. It's really going up in the forties and fifties. So we now are able to look just like we were with pre diabetes and then insulin resistance earlier and earlier. We can see what's going on and we can do something about it and we can prevent you from getting all the way to that final stage of dementia.

**SHAWN STEVENSON:** Wow, that PT 217.

**DR. DALE BREDESEN:** P-TAU 217. Yeah. That's exactly right.

**SHAWN STEVENSON:** That's remarkable because, what we tend to see obviously is progression, right? Over the course of decades that as you just broke down, I love that with those four phases. You break it down those four phases and seeing that early onset, we might just brush it off, right? Phase one, phase two, even. And to see a disease that takes root decades earlier before we might see a full manifestation or diagnosis is really scary because we didn't have those early indicators like an insulin resistance, blood sugar management, hemoglobin A1c and just being able to see what's going on right now, that we can prevent. But now and again, thanks largely to your work to be able to enlighten us about let's get these things checked out because you also have it's not just this test. There's other things that you can do to find out what your risk is.

**DR. DALE BREDESEN:** You know what? This is, you're exactly right, when you tell people, you've got the earliest changes of Alzheimer's but you're gonna be fine. They're scared. They're like, oh my gosh. I have the years. No, that's good news. Imagine that you're in a canoe heading for a waterfall. It used to be that nobody tells you until you hit the waterfall. Now, we can tell you when you're two miles upstream. Take your time. Paddle to the side. You're never going to go over that waterfall. And that's the big difference. That's what's changing. So this is why I want to let people know, do not worry. It's just like saying, you got the earliest insulin resistance. You're never going to get type 2 diabetes. We're not going to let you get type 2 diabetes. And that's where we are now with cognitive decline. So it's a great news, in fact, that we can say, yeah, You're, way years ahead and we're, and you never have to worry about this.

**SHAWN STEVENSON:** Yeah. I want to talk a little bit more about something you brought up, which I didn't know we were going to talk about this. Right now we have well over 4 trillion a

year healthcare systems. And I don't think folks realize how much of that is due to dementia and Alzheimer's. That's shocking. You said about \$350,000 per person. So this is quite likely a big part of potentially bankrupting our economy.

**DR. DALE BREDESEN:** Oh yeah. So it's been pointed out that if we don't do anything about Alzheimer's, it will bankrupt Medicare within about the next 15 years or so. So we're not that far away. And we need to do something now. And the great news is we have all the tools to do that now. So it's time just as in the past, there were, smallpox vaccination, there was polio vaccination. There was work that developed a triple therapy for HIV and now it's time to get a literally a moonshot for let's stop dementia. We could, I would hope we could cut it by 90%, but at the very least, if we could cut it by 50%, it would make a huge difference. And think of all the families that would be impacted. So there is so much that can be done, and you're absolutely right, people just aren't doing it yet. They're saying my doctor must know one of the common things I hear is, if what you guys are doing were true, then my doctor would be doing it already.

No, that's unfortunately, as you well know, that's not the way the medical system works. And in fact, medicine tends to be slow at picking up things. You go back, the amazing thing, you look at the history of scurvy. You go, people were dying of scurvy, of course, on ships, that was the big common thing because they didn't have vitamin C. Nobody knew about this is 1600s, 1700s, 1800s. Into the 1900s, people didn't treat it appropriately. And interestingly, at each century, somebody would realize, Oh, my gosh, if you just have limes or if you just have some citrus or if you whatever. And yet then the doctors would say no, we don't think that's what it is.

And so they would go through the dark ages, each century. And finally, they figured out, Oh, this is thing, vitamin C, you have to have this. And so now, the number of scurvy deaths, extremely rare. And that's the way it should be with these other things. But we're in a century where the big problem for us health wise is complex chronic illnesses. It's Alzheimer's. It's Lewy body dementia, ALS, cancers, cardiovascular disease. These are all multi component systems biology diseases, not like pneumococcal pneumonia of last century and, TB and things like that. And we've got to change the way we think about this, and we've got to look much earlier.

You can no longer wait for the symptoms. You've got to get in early. That's where wearables are going to be so helpful. What's going on with your Oura Ring, and what's going on with your Apple Watch, or your Fitbit, or your Garmin, or whatever you happen to like. Very helpful, because they can tell you, you've changed or they can tell you your sleep is not good, your heart rate variability is not good, and so forth and so on.

**SHAWN STEVENSON:** I'd love having you here is such a great opportunity because we could take a peek behind the curtain and understand what we're dealing with when talking about Alzheimer's at its core from your perspective. What is alzheimers?

**DR. DALE BREDESEN:** So yeah I'm so glad you asked about what's Alzheimer's. Most people don't ask that they say, what do you mean? It's Alzheimer's Yeah, because people it's just a name but they don't really understand and so that's been the big problem people have spent their whole careers saying it's about free radicals. It's about amyloid. It's about tau. It's about a prion. It's about what's the other common one? Type three diabetes. It's about herpes of the brain. All these things have been theories of Alzheimer's. None of them has led to successful treatment of Alzheimer's disease. So what we realized in the laboratory over the years, is that the fundamental nature of this problem is a network insufficiency.

So here's what I mean by that. You have this unbelievable supercomputer in your skull. So you have the equivalent in terms of memory to about 2,000 home computers inside your skull. It's incredible. You have the equivalent of some of the largest supercomputers in the world inside your skull. You've got a hundred billion neurons on average, about 5, 000 connections per neuron. So you have 500 trillion synapses, just amazing. In your remarkable brain. And what happens is you've got a supply for those and you've got a demand. And things supply are blood flow, as oxygen saturation substrates like ketone and glucose that you have to mitochondrial function.

All of these things are critical trophic factors: your nutrients, your hormones, that's all on the supply side. Now on the demand side. Your demand goes up with things like toxin exposure. Air pollution, of course, is in there. Things like inflammation, if you've got change in your dentition chronic sinusitis, leaky gut tick borne illnesses. These things are all demanding more because your brain has to shift now from a connection mode to a protection mode. It's really fascinating. The body has these mode switches, which are so fascinating. And of course, the obvious one is you go from sleep to wakefulness. You're a different person. You're asleep. You're not recognizing things, but you're cleaning things up. You're helping your brain. You're doing all these remarkable things.

You're dreaming all this sort of stuff. When you're awake, you're moving around, you're doing all these things, two completely different modes. And what we discovered in the lab is that Alzheimer's fundamentally has this mode switch. You have a molecule called APP, amyloid precursor protein. It's the thing that gives rise to the amyloid that has been vilified in Alzheimer's. But your brain doesn't make this to give you Alzheimer's. It's protecting you. So you've got a mode of connection, which is going on.



You're able to learn new things, remember new things. Your APP gets cleaved at a single site and you make two peptides, one outside the cell, one inside the cell that says, things are good, Shawn. Keep growing up think you're gonna make memories, you're gonna do great. Now when things turn not so good You're not getting that you may have sleep apnea as a common one. You may have some problems with your dentition. You may have some organisms that have gotten into your brain. That's common It turns out the brain is exposed to these organisms much more than we used to think it was So your brain now says oh, I have to switch from connection mode to protection mode. So now you're switching over and now you switch from making those two peptides that are supportive. You switch to making four peptides that are all protective. And what they do is they actually surround microbes and kill them. That's what the amyloid doing. It's protecting you. So when we look in the brain, you see the amyloid, you say, Oh, you got Alzheimer's.

No, you're responding to these insults. And that's by definition, pathologically, Alzheimer's disease. Again, there's just so much. You see that, you say, Aha, okay, we gotta figure out what those insults are, and we've gotta fix them. So what we do when we look at patients, we look for all, and there are dozens and dozens of these insults. We're looking for, do you have sleep apnea? We're looking for, how's your oral microbiome? Do you have a leaky gut? What is your nutritional status? What is your status with your hormones? Are you exposed to toxins? All these things. And then we're saying, okay, we're going to address those, and we're going to build things back up on the supply side.

We're going to improve these things. People come back. It's so great to see them. The first thing that usually the spouse will say to me is they're so much more engaged. They just interact more. They're like part of the family. Again, you can see as they're switching back because your brain only has a certain amount of resources. So it's going to have to go more toward protection or more toward connection. And we can get them back if we can get rid of the things that they're protecting themselves against. So that's the fundamental nature of this. Imagine you're, for the network insufficiency, imagine that you're pedaling your bike uphill. And now, if either you haven't eaten very well, you're not pedaling very well, or someone now puts a 60 pound weight on, it's going to be much harder, or the hill gets much steeper. You just can't do it. And that's exactly what's going on in the brains of the patients with developing Alzheimer's.

**SHAWN STEVENSON:** I love this at work insufficiency, and it's not this one thing and that's the problem. We could become obsessed and our kind of conventional thinking on trying to find that one thing and there's this one cure. What I've really gathered from your work is that there are no cases of dementia Alzheimer's that are the same. You know, it's all unique and this should be obvious now at this point in medicine, but we have Standard of care, and we're all very unique.

We have a unique Microbial fingerprint. We have a unique chemistry, our hormones, our neurotransmitters. The list goes on and on we're very unique, but we treat patients as the kind of systematically and not really paying attention to those unique factors. And one of those that we've been obsessed with when it comes to dementia is amyloid plaque. And so I want to take a moment because this is very important. This is something that I was taught as well. And what I hear you saying is that the amyloid plaque is really a response to our immune system, I would say.

**DR. DALE BREDESEN:** Yes.

**SHAWN STEVENSON:** And so what it looks like is. It's essentially as a we'll just say there's inflammation in the brain, right? There's a fire. There's a problem in the brain and there's firefighters there i.e. the amyloid plaque.

**DR. DALE BREDESEN:** Yep.

**SHAWN STEVENSON:** And because they're there they get blamed.

**DR. DALE BREDESEN:** Yes.

**SHAWN STEVENSON:** Right? There's something on fire, but they're blaming the firefighters. Yeah being there.

**DR. DALE BREDESEN:** It's exactly right Yeah. So the amyloid, you're absolutely right. The amyloid is part of the innate immune system. And interestingly, it's coming from the same parent molecule, this APP amyloid precursor, that is the one that supports memory and on the good times, but it's also protecting you in the bad times. So you're saying, okay, we're going to have to switch over now. We're going to make that amyloid and that's going to help trigger this process. Interestingly, it triggers the tau that's now also an antimicrobial peptide. Both of them are working together. And then interestingly, they trigger more of themselves, which is why they are prions. So they're saying, Oh my gosh, we've got a problem here.

It's just like cops calling more cops. So imagine if your neighborhood now had a crime wave. You call up the cops, a bunch of cops pull up and then the pharmaceutical companies say, we got to get rid of all these cops. No, the cops are there because you had the problem that you called them for. Getting rid of the cops without getting rid of the crime. What's going on with the actual crime? That's going to be a problem.

**SHAWN STEVENSON:** Got a quick break coming up. We'll be right back. A huge aspect of long term brain health is being able to maintain healthy brain plasticity. Enabling our brain to continue to grow and adapt. A fascinating new study published in the journal Neuron found that having optimal levels of key electrolytes, in particular magnesium, is able to restore critical brain plasticity and improve cognitive function. It's no accident that our special guest, Dr. Dale Bredesen, when I offered him some electrolytes to take with him as he's going to jump onto a flight, he said, absolutely. He knows how remarkable and how important it is to have key electrolytes for cognitive function and brain health.

For example, sodium, another critical electrolyte, was found by researchers at McGill University to function as a "on off switch in the brain for key neurotransmitters that control our cognitive function and protect our brain from neurodegenerative diseases". We need these key electrolytes. Electrolytes are minerals that carry an electric charge. And they literally enable our brain cells to talk to each other signal transduction in this communication with our dendrites and our synaptic connections. And, just our neurons being able to communicate and to be on the same page. We want good brain communication and electrolytes are key.

For that, the very best electrolytes in the world with the optimal ratios of these key electrolytes that have been affirmed with now millions of data points with real people. No added sugar, no nefarious artificial colors. This is what you're getting with LMNT. Go to [drinkLMNT.com/model](https://drinkLMNT.com/model). And you're going to get access to these incredible electrolytes that are now being utilized by NFL teams, by Major League Baseball, Major League Soccer, by the NBA, by U. S. Navy SEALs, by the Olympic weightlifting team. The list goes on and on. So many organizations are switching their entire team, their entire organizations over to LMNT. And LMNT is going to hook you up with a free sample pack of all of their different flavors for you to try out with any electrolyte purchase. All right. So head over there, check them out right now, go to [drinkLMNT.com/model](https://drinkLMNT.com/model). And now back to the show.

**SHAWN STEVENSON:** I think this would be a good opportunity to ask you, from your perspective and just the huge amount of data that you've compiled. What is it about our lifestyle, our environment? What changed? Why have rates of Alzheimer's gone up so rapidly just in the last few decades? What, what is going on? What's behind this?

**DR. DALE BREDESEN:** Yeah. Isn't it amazing? Yeah. This has been such a common problem. And of course, it was recognized that people as they age could get dementia. This is something that Marcus Aurelius talked about, 2000 years ago. So it's certainly been around for a long time. The Ayurvedic physicians, we wrote a paper a few years ago saying, there are subtypes this is great.

We're the first that are really going to show these different, inflammatory subtype. And we had an atrophic subtype and a toxic subtype. Guess what? It turns out the Ayurvedic physicians described subtypes of dementia thousands of years ago. So we were like way behind them. But what's happened, you're absolutely right. There's been a change with several critical things. And the problem is they all, they all drag, put a drag on the same system.

So now, we still, as people are getting into their 60s, 70s, 80s, they can still have dementia. But as I mentioned earlier, you can pick up these early changes in the 20s and 30s and 40s which is again a good thing because we can now head it off so it doesn't go further. But what's happened is several things have come together, unfortunately. Number one out of all the things, I hate to say it, is probably sugar. We, a hundred years ago, had very little intake of sugar, as and with the ability for people, everybody was getting candy. Look what, I mean, Hershey's. Milton Hershey over a hundred years ago said, People like this stuff.

Milk chocolate was a delicacy that you could only get in Europe at that time. And he said, I can make an empire out of this. And I give him great credit. He was a visionary. The problem is in the long run that hurt a lot of people's health. And so then you have soft drinks that were coming in. And back then people sold things like Pepsi cola as a health drink, because this is supposed to be helping your digestion. That was Pepsi was supposed to come from Pepsin.

**SHAWN STEVENSON:** Dr. Pepper had herbs and spices.

**DR. DALE BREDESEN:** There you go. All these things. And unfortunately so much, so much false advertising with all these things. And then of course, other things like cigarettes came in and stuff like that. But largely, if you look at a very, probably the most common contributor to cognitive decline. So we look at dozens and dozens of these things. Insulin resistance and sugar handling problems are probably the number one most common. And if you have prediabetes, you have about a doubling of your risk for Alzheimer's. If you have full on type two diabetes, it's more like threefold. And if you have metabolic syndrome, which includes all the lipid abnormalities as well then you're talking up around five folders or so.

So you really go up as you have these various metabolic problems that over 80 million Americans today have, which is ultimately going to affect not only your cognition, but your renal function, your metabolism, your vascular status, your inflammatory status. I mean, this is, you can say this is the kind of current western disease that's killing most of us, related to that particular theme. So that's a big one. Then you add to that more drag. So guess what? If you're around air pollution, the California fires. And just remember the fires that were in Canada, that were sweeping across the smoke sweeping across the Northeast, that increases

your risk. Microplastics are now coming up surprisingly as a problem. They're finding microplastics in the brain. I don't know if you saw the amazing study recently, people who had microplastics in their carotid arteries did worse than people who had just as much plaque, but without microplastics. So there's something about those microplastics that goes beyond old fashioned plaque, which is really scary. And then now people of course are looking at nanoplastics. So this is a concern. Then, sleep apnea, one of the common contributors I see. And unfortunately, do you know sleep apnea goes undiagnosed in about 80 percent of people who have it. I talked to a guy recently who said, I was told I had sleep apnea and I said, if I have to, if I have to do CPAP, I'd rather die.

Unfortunately, you may die of Alzheimer's if you don't do something about it. Now, the good news is there are things coming, opening airways, dental devices. I mean, I'm hoping that CPAP is going to become a less common requirement because you're so many people don't like it, as this guy said. So that's another common contributor. And then leaky gut is everywhere now, is of course, gut microbiome changes. And you could look, there are microbiome changes associated with Alzheimer's and others associated with less Alzheimer's. So that's another thing that's coming up as a problem and something that we need to deal with.

Okay. Oral. It's amazing. The whole dental field is now really learning about Alzheimer's and realizing how important it is for the dentist's role in dealing with cognition. And that goes with gingivitis, periodontitis, mercury amalgams, airway restriction, sleep apnea, all these things. Her, even herpes simplex on your lip increases your risk. There was a very interesting study out of Taiwan that showed that people who treated in mid-life treated their herpes simplex in their lips had a much lower rate of developing Alzheimer's than those who did not treat them. And you've got things like valacyclovir that are very benign drugs that you can take for suppression.

So, what's happened is we've kind of had this, it's like the perfect storm. We've had this confluence of things, and I would add one other thing. We've made what's happened over the last 150 years, really, with the industrial revolution and then with all the things that have done with diet. There's been the addition of we live in homes, and we think that spending our lives indoors is okay. That's not the way we were born. That's not the way we were evolutionarily designed to live. We've made all these assumptions. Assuming it's okay to eat ultra processed food. Assuming it's okay to go with a lot of stress in our lives.

Assuming it's okay not to have much sleep at night. These were all assumptions and they're all proving to be incorrect. So what happens? We build our homes, as someone said, from mold food. So unfortunately, and this is just amazes me.

When you build a house, nobody says that you have to keep the wood dry, isn't that amazing? So the stuff sits out there and the rain pours down and the mold starts to grow. Now you build a house out of it and you've got, and now people get leaks in their roofs and they don't realize how damaging that is until someone, they're getting cognitive decline and someone says, Oh, we better check your urinary mycotoxins, and they're through the roof.

Talked to a guy recently, amazing guy, very smart guy who was tapped to come and help a youth group in the Bay Area. And comes out to help the youth group. So they move him into this new place and within a couple of weeks he started to have dizziness. He had no idea what the heck is going on here. And then within the next several months, he starts to notice, he's not really thinking the way he used to. He goes to two famous universities, leading universities in the world, and they both tell him, you got Alzheimer's, you're gonna die, there's nothing you can do about this. He then goes to one of the physicians that we trained in our protocol and she says, yeah, this is fixable.

You have got massive mycotoxin exposure. You are obviously highly sensitive to it. She detoxes him. She gets his metabolism going in the right direction. And I should point out. Put in a good word for her, this is Dr. Geraldine Brossfield, fantastic physician who's down in Palm Springs area. And she gets him to turn around and things are doing much and he's, again, this is after being told by world experts at two, world class universities that there's nothing that can be done. You're absolutely right. Things have changed for the way that we live our lives and nobody has stood up and said but we're killing ourselves and I think this is where groups like yours and Functional medicine and Jeffrey Bland and Mark Hyman and Drew Pruitt and all these people are calling attention to the fact that we've got to change the way we live our lives. It is literally killing us.

**SHAWN STEVENSON:** The way that you package that up. It just hit me that Dementia and Alzheimer's is an adaptation. It's an adaptation to our very deranged lifestyle. And again, you just said we haven't stopped to ask is this okay when we're making our diet primarily ultra processed foods, what is the outcome? We just accept that it is normal, and, but it's not just that. And that's the cool thing about this too, is which should be obvious. It's a multifaceted thing, but we've been looking for that one thing. And one of those things, which has a nice amount of data to affirm it, but not a solution. Is this concept of type three diabetes and our increased consumption of sugar? But it's a part of the puzzle. And I want to ask you about that one specifically because you led off with that one and it's something that is, we notably have seen the big change. Closer to the 1900s is maybe four to six pounds annually of added sugar, an American would get in now. It's like 80.

**DR. DALE BREDESEN:** Yeah. Yeah, we're closing in on a hundred pounds. Isn't it amazing?

**SHAWN STEVENSON:** It's crazy. And what do you think's going to happen? But I want to ask specifically why it's so detrimental to our brain.

**DR. DALE BREDESEN:** Yeah, great question because we break this down into six different pieces. We were talking earlier, it's energetics, it's inflammation, it's toxicity. Those are the three biggest ones. And then the three intermediate ones are its neurotransmitters, trophic activity, and stress. Those are the big ones. Okay, sugar affects all six of those. That's why it's killing you. And, it is interesting. As you said, it was an adaptation, which is a really good point. Alzheimer's is your brain telling you to live small, you can no longer afford to live big because you can't support 500 trillion synapses anymore because of what's going on. So this is what we want to say. No, you want to get back to live in the right way and you will be. Let's take the simplest case. Let's say you just said, I'm going to sleep two hours every night after about what a week of that, depending on a lot of things, your age and what the rest of your health.

After about some period of time, your body would say, You can't do all the things you can't have the job you had before it would now adjust you downward. You can maybe go scavenge for some food. Maybe you can drive part time, but you cannot live a human existence. That's what Alzheimer's is, but it's just that it's more complicated because it's a whole network, but it's saying, okay, you're not supporting this. You've got too much drag and you've got not enough supply. And so with sugar, what's the first thing that happens? You get insulin resistance. You literally, and the cool thing, the amazing, to me as a scientist, I was always interested in the mechanisms. How does it work? Why does it work this way? What are the circuits involved?

You can actually see a change in phosphorylation of IRS one, which is the insulin receptors downstream signaling molecule. When it is phosphorylated on tyrosines, it's active and it's telling you, okay, you had some sugar with no problem. We've got the insulin going. We're going to, when the, your metabolism and chain where you were good. Now what happens is you get that high insulin for a long time. It's too much. It's got to turn. It's literally like someone's playing too loud. So you gotta put some earmuffs on to tone it down. So now what happens, you change the phosphorylation pattern. So now that it's in serines and threonines, which are downs that we're saying, okay, Muffle it a little bit so you're now not getting that same insulin signaling.

So an insulin is critical not only for metabolism. It's a very important growth factor for your brain neurons. So you got already a double, that's just the beginning, you got a double whammy on your Insulin resistance and the way that it functions as a trophic factor. Then you've got hemoglobin A1c, of course.

You've got all these different proteins that are non enzymatically glyated. It's like remoras on a shark. The glucose just goes right up there. And of course, in fact, fructose does even worse. Boom, you got this stuff where you're now making the, you're making glyated proteins. Hemoglobin A1c is just one of them, but there's hundreds more.

They're not working normally. By the way, your immune system is now picking them up as abnormal because you now they look different. You're now got inflammation. Now you've got vascular disease as well. Now you've got these things like Glyoxal that are also toxic compounds in your body. Oh my gosh. Your entire life is changed because of this stuff. Also, you're now running more on cortisol and stress. When you got that high sugar diet you're not sleeping as well. Everything that is pro Alzheimer's that is downsizing is being triggered by just having this. And Professor Rick Johnson, really good guy from the University of Colorado, wrote an important article a few months ago, and I was fortunate enough, and David Perlmutter and I were both co authors on this.

But to be fair, it was Rick's work over 20 years, and of course, David wrote a whole book about this about, called Drop Acid, about uric acid and the relation with fructose metabolism. And what Rick showed that is so fascinating is if you go down the list of looking at where in the brain it's changed, what happens to your MRI, what happens to your metabolism with fructose. And then you do it, what happens with Alzheimer's, you can just line them up. There, there's a remarkable amount of similarity. Now, I don't think that Alzheimer's is a hundred percent of fructose disease, but it's more complicated than that. But that same idea that these are the sorts of things that are changing your metabolism toward a pro Alzheimer state.

**SHAWN STEVENSON:** Fascinating. This just clicked up for me mentally, the advanced glycation end products.

**DR. DALE BREDESEN:** Yes.

**SHAWN STEVENSON:** Appropriately acronym, AGES. And what that can do to your brain and aging your brain rapidly.

**DR. DALE BREDESEN:** Absolutely.

**SHAWN STEVENSON:** Oh my goodness.



**DR. DALE BREDESEN:** And again, fructose does that more rapidly as Robert Lustig has pointed out over the years. It's browning your cells, you're browning your brain, just like you'd brown.

**SHAWN STEVENSON:** Sautéing.

**DR. DALE BREDESEN:** You're sautéing, just like you do it in a pan.

**SHAWN STEVENSON:** Got those sweet onion brain cells. Yes.

**DR. DALE BREDESEN:** They don't work as well.

**SHAWN STEVENSON:** Now, I want to circle back to this too, because this is another place where there's so much activity around this subject right now, but we don't really have a definitive answer. The brain was considered to be off limits in many ways. And we've got the blood brain barrier, maybe somewhat sterile environment. There's not necessarily microbes hanging out there. You already mentioned that microbes can be one of these big issues with the brain. But this term microbiome, right, we know that we have a skin microbiome, we have a microbiome of our lungs, we have a microbiome of our gut, obviously. But this awareness of a potential brain microbiome, right? And all the, and here's the biggest part. The interaction of all these different networks is so fascinating and it's a, I believe it's fundamental to our sovereignty as a human being for these systems to operate together. But our gut microbiome could be deeply influencing what's happening upstairs in our brain. So I want to talk about. The potential of a brain microbiome, if you have any information on that and also the connection with our gut microbiome.

**DR. DALE BREDESEN:** Yeah. And to get to the brain microbiome. So we'll talk about the brain microbiome, but I wanna mention something 'cause you brought up something really important. You, because you mentioned networks. And here's what's interesting about this. During the evolution solution, we selected for, over the years, it was between five and 7 million years ago. That the hominids first appeared from the Simeons. And, we had to change to come down out of the trees to walk on the Savannah, all these sorts of things. And to do that, in fact, we had a proinflammatory state to get rid of things like when you puncture your feet and stuff like that.

But here's the interesting thing. When we evolved, there was this repeated, a selection for performance over durability. So if you have something that selects for durability over performance, it's going to get killed by the thing that's selected for performance over durability. So constantly we, as we evolved, we selected for performance, not durability, and

you can even see it in mitochondria. They're working amazingly well, but they're fragile. It's like driving a Ferrari, that sort of thing. And so with humans, what happens is we've gotten these different sub networks. So we've got one for neuroplasticity. It helps us change our behavior.

It helps us outsmart that our food, it helps us outsmart our, the people were warring against all this sort of thing. We've got one, which is for motor modulation and that helps. So that's the thing that goes awry in Parkinson's. You've got one that is for motor power, and that's the thing that goes awry in ALS. So each of these sub networks has been selected for performance throughout the years, but because of that it's got an Achilles heel. It's not that durable and as you age if you're damaging it all the time, it's going to start falling apart. So it's literally going to start downsizing and that's what happens to these networks. And that's what we believe is the reason that these neurodegenerative diseases are relatively common cause of death. And that's, by the way, also what has been explained about aging you select for things, great performance young, but not necessarily good performance as you're getting older.

Now, obviously, people are going back and saying, how can we live longer with performance? That's the trick. You want performance and protection. I mean, that's the issue. Now, with the microbiome, amazing, because I was taught that the brain is a sterile organ when I was training to be a neurologist. And of course, it's turned out that's, it's not that simple. And there was a fascinating experiment done a couple of years ago. They actually did this in rodents, but it's the same idea in humans. And they said, okay. Okay. Okay. There's a blood brain barrier that everybody has, studied, talks about, et cetera, everyone accepts that.

Let's inject an organism into the bloodstream, and they're going to use candida, because candida is everywhere. Everybody gets exposed to candida. And let's see, can it keep it out for a month? Can it keep it out for a year? I mean, this is a blood brain barrier. Maybe it'll keep it out for the whole life. The answer was a couple of minutes. These are things that are getting across the blood brain barrier all the time. So no surprise, one of the responses, just as you said earlier, it's that immune response. The amyloid is part of the innate immune system. It's part of the inflammatory part, not part of the adaptive part of the immune system.

So as long as you've got that innate system activated, which by the way, the most common thing recently is COVID 19. That's going to activate your innate immune system? And unfortunately, it increases your risk for cognitive decline. It increases your risk for Alzheimer's disease. So the microbiome now is turning out that it's not so much about infection, no infection. It's not sterile versus infection. It's. What is the set of organisms, your microbiome, literally, and we'll see what's going to turn out. This is one of the, one of the things being

done by Professor Rudy Tanzi at Harvard who's looking at, what's the brain microbiome look like and what happens when it's changing?

We know that things like sinusitis are affecting it. We know that things like your oral microbiome is affecting it and systemic microbiome. What's happening if are you getting infected with things like tick borne illnesses, Borrelia, Bartonella, Babesia, Ehrlichia, Anaplasma. These are all coming from ticks. Again, amazing the ticks, who knew the ticks were going to be one of the things we had to be concerned about for our brain health in the future. The, no question the microbiome is going to get better and better. I suspect at some point people are going to be inhaling things because the intranasal route is a very good way to get things like glutathione and insulin and things like that into the brain. And people are using this increasingly. And I think that's going to be, there will probably at some point be a good, brain related probiotic right now there are oral probiotics, of course and gut probiotics and things like that.

**SHAWN STEVENSON:** Yeah. Did you know that there's a spice in your spice cabinet that can very likely improve your insulin sensitivity and help you to burn more fat? This spice has been utilized for thousands of years and now today we got tons of peer viewed evidence showing how incredible it is for so many aspects of human health. I'm talking about the renowned spice turmeric. Now turmeric is actually in the ginger family, but it has its own claim to fame today. And researchers at the Department of Neurology at USC found that one of the active ingredients in turmeric, curcumin, is able to help eliminate amyloid plaque in the brain. Slow down the aging of our brain cells, and also help to remove heavy metals and reduce inflammation in the brain. By the way, I'm talking about its impact on body fat.

Turmeric has been found to both improve insulin sensitivity, reduce blood fats, and directly act upon our fat cells. And to take it up one more mental notch, research published in the Journal of Ethnopharmacology points to turmeric's potential to reduce both anxiety and depression. Turmeric functions like a Swiss army knife for human health and benefits. And today, more than ever, people are going beyond the casual curry. And doing one of the most remarkable teas that you're going to find, and that is having a turmeric latte. And my favorite turmeric latte, my favorite turmeric drink is coming from Organifi Gold. And this is because it also has other bio potentiators that make turmeric work even better.

I'm talking about cinnamon, talking about ginger. And also here's the thing that makes Organifi's gold so remarkable. It also has a medicinal mushroom, Reishi, which according to research published in pharmacology, biochemistry and behavior, they found that Reishi was able to decrease our sleep latency, meaning that we fall asleep faster, was found to improve our overall sleep time and also. Improve our deep sleep time and light sleep time. So our REM

sleep and non REM sleep, pretty remarkable. So I highly encourage you to check out this incredible Organifi Gold Blend. Go to [Organifi.com/model](https://Organifi.com/model). That's O R G A N I F I .com/model.

You get 20 percent off their incredible gold blend as well as their green juice blend, their red juice blend, and actually store wide. So definitely take advantage of this. Make yourself your own turmeric latte. I love the turmeric blend, the Organifi Gold with some almond milk or milk of your choice. Warm it up if you're feeling spicy and it's one of those things Really helps to add another layer to your health and wellbeing. Check them out. Go to [Organifi.com/model](https://Organifi.com/model) 20 percent off. And now back to the show.

**SHAWN STEVENSON:** Something really, and this for me helps to make this so obvious, which is our sense of smell being so deeply tied to our memory, for example. And just understanding like data coming in from our other senses is sent to a relay center, basically, and then distributed. Whereas a lot of the information is coming through our sense of smell through our sinuses goes directly to the amygdala, to the hippocampus, right? And, it just makes sense. And it's just to think, just to step back and look at of course, this stuff is getting to the brain, and understanding how important our environment is.

Not just our food environment, but the air that we're breathing and we're living in an increasingly toxic environment. The EPA reported, there were like 80, 000 newly invented chemicals released into our environment annually and we're talking about tons and tons, billions of tons, probably more. And we're just, again, just Oh, this is business as usual, right? And by the way, in their report that was through, through standard business practices. So they're not talking about the annual catastrophic events that happen, but here's the good news. All right. We can tap more into it because I love this so much.

I was not expecting you to say this, but the performance versus the durability, it's like leaning more into how can we be more durable in this ever changing world. And with this being said, you've identified some very specific things that we need to be doing, incorporating. Before we get to that and I and this can even be a part of this I'd love to talk a little bit about one of the studies that you conducted. The reversal of cognitive decline in 100 patients.

**DR. DALE BREDESEN:** Yes.

**SHAWN STEVENSON:** Let's talk about that study.

**DR. DALE BREDESEN:** Yeah, so what happened was the very first patient I got a call in 2012 And we had just been turned down to try to do a trial because they said, Oh, you're going after more than one thing. Yeah, this is a complicated illness. And so I was very disappointed

about this. And I got a call saying, would I see a woman who was coming out from the East coast who was going to commit suicide? Because her mother had died of Alzheimer's. She watched the decline and how horrible it was. And so what I see her and I said look, we just got turned out. I can't do anything for humans, but I can tell her what we were going to do in our trial. And so we spent two and a half hours going through all this stuff.

And she's the first one. She's patient zero. Who's actually in the, who's in the documentary on Amazon, the 'Memories for Life: reversing Alzheimer's'. And she talks about how she got her memory back and all this sort of stuff. And just beginning this, we started having the first. I wrote up the first 10, we published that in 2014 and then I wrote up another 10, where we were looking at more objective things, so it's like you kind of have to get a toehold, start somewhere, and of course and everything we've published, someone will say it's not enough. You need this, that, or the other. Okay, you gotta take it one step at a time. We're changing the way you think about brain disease. And after we published the second group and we then saw that there were these patterns of more inflammatory or more toxic, I thought, all right, let's start a poll. Let's poll some of the doctors who are now doing this.

And see okay do you have people that are.. Because I wanted to say okay, is everyone you know are people able to do this. It's not just a one off and sure enough I checked with several doctors, and we quickly put together a hundred people that had done. So, these are all people who had improvement on their MRIs or their cognitive tests or their electrophysiological tests or what have you. Some form of documentation of improvement. And I think there are 16 different doctors on there, all included in the author list. And just put our information. collective experience together to say, yes, this is now happening out there. And now let's start with the next step, of course, is to start doing clinical trials.

**SHAWN STEVENSON:** And one of the most incredible parts of this is the sustainability of the results.

**DR. DALE BREDESEN:** Yes.

**SHAWN STEVENSON:** Talk a little bit about that

**DR. DALE BREDESEN:** Yeah, i'm so glad you brought that up because so we just actually posted it's not even been published yet because it's still in review. But thankfully now you're allowed to post preprints, before review It just has to say on there, you know in review, you're not yet reviewed. And so we did post it's now freely available online a preprint showing people who sustained their cognitive improvement. Now, this again is just a beginning. It's seven people that we looked at. I did this with Dr. Mary Kay Ross and Stephen Ross and

looking at this, there's seven people where, again, where there was very good documentation of improvement. And we learned something interesting with this. We had people who, over 10 years of sustained improvement.

And the woman I treated in 2012, is now over 12 years and she's doing very well. Just talked to her a couple days ago and she's doing well. And so these others, now here's what happens though. Some of them, after several years, will now have a secondary decline. And when they do that okay, what happened? And you then dig in and look to see. And what you find is the same sorts of things before. Now something new has appeared. We had, as an example, one of the seven women who's on there, she had six years of good improvement. Then she had a decline, and she said, something's wrong again. She turned out to have three things.

She had a chronic sinusitis that wasn't there before, which with *Cryptococcus laurentii*, interestingly, an uncommon organism. Secondly, she had sleep apnea that had not been diagnosed. It may not have been present before or it may not have been picked up before, but for whatever reason, it was quite significant. So she started getting treated for that. And then the third thing was she had a new leak in her roof and she had new exposure to mycotoxins that was picked up in her lab tests. Those were treated. And what here's what's interesting. She had gotten up to the 70, 72nd, I guess it was 71st or 2nd percentile.

She went down to the 61st percentile, which is still not horrible, but it was a big difference for her. She could notice in her life that something was wrong. She had brain fog, things were not good. After she got treated for those three things, She weighed up to the 80 seconds. So she actually exceeded where she had been when she was doing well. And we see this again and again, you're kind of, you're doing the best you can to keep these things at bay. But when you then find more and you deal with those, you do even better and you get improvements that you hadn't seen before.

**SHAWN STEVENSON:** Yeah. And what I'm hearing again is that it's personalized for where you are right now.

**DR. DALE BREDESEN:** Exactly.

**SHAWN STEVENSON:** And having those tools, because things are going to change over time. And. You have the Bredesen seven these factors that you've identified and these are largely under our control to influence these things. And some of them, I'm just going to list them off here. Nutrition, obviously, movement, exercise. You've mentioned how important sleep is and how detrimental it can be if you have sleep apnea, for example, or you're lacking sleep stress. You've mentioned that a couple of times. So under looked. Yeah. As a causative agent in all

manner of chronic illnesses and infectious disease as well. Stimulation, so I would imagine this would be various forms of the brain.

**DR. DALE BREDESEN:** Training and yeah and photobiomodulation and things like that. Yeah.

**SHAWN STEVENSON:** Detox.

**DR. DALE BREDESEN:** Right.

**SHAWN STEVENSON:** And being able to support these pathways to eliminate this stuff that we're exposed to, and Smart supplementation is another piece of this. And obviously you go more in depth when people are following you, you've got several books. Now they could check out the studies that you've published. And also you mentioned that film as well. Can you tell people where they can get access to the film?

**DR. DALE BREDESEN:** Absolutely. Yeah. It's on Amazon. And so you can stream it from Amazon and it's called Memories for life: reversing Alzheimer's narrated by Michael Buble, who did a great job. And..

**SHAWN STEVENSON:** Michael Buble! That's some very melodic narration right there.

**DR. DALE BREDESEN:** Exactly, some very melodic narration. He does a great job. And as with so many other people he talks about and he talked about in his interviews that, this has affected his family. And so he was particularly interested because he wanted to be active and helping. And so I really appreciate that he did that. So you can take a look at that. And yes, as you said, we think of the, in terms of basic, I call them the basic seven. I did not name them that name that you said. So these basic seven things. And then Beyond that, you've got to look at the specifics. Is there a pathogen that's been missed?

And there are many of these chronic pathogens that can contribute anything that's given you chronic inflammation. Is there a toxin that's been missed or multiple toxins? These are all important. And if you address these, you can get back to a brain that is able to be in that connection mode instead of that protection mode, and is now able to build and maintain synapses once again.

**SHAWN STEVENSON:** This has been amazing and I want everybody to definitely go and check out this film and its memories for life and narrated by Michael Buble. Amazing and this is such an important topic. I've been excited to talk to you for quite some time and the big takeaway today is that we could do something about this.

**DR. DALE BREDESEN:** Yeah.

**SHAWN STEVENSON:** And if we don't, you already, we started the episode off on how dark those times can be, right? We've got to do something right now. We've got to get educated and we've got to add in these pieces for ourselves right now. But I think the most important piece is just staying close to your work as things are evolving and you've got some great assessments and all those kinds of things. So can you share your website and also, people could pick up copies of your books as well.

**DR. DALE BREDESEN:** Absolutely. So yeah, drbredesen.com you can look there. There's mycognoscopy.com, which will help you to, just like you, we all know you need a colonoscopy when you turn 50, really, if you're 35 or over, get a cognoscopy, see where you stand. And with these new blood tests, you can really see things coming years ahead of time. And then, as you mentioned, I've written three books now. "The end of Alzheimer's" is the first one. The end of the Alzheimer's program is the second one. And then the first survivors of Alzheimer's, seven people who wrote their stories.

It was great that's the most exciting thing to me when I hear about someone who's turned it around and now is no longer being told they're going to die and they're back with their families and doing well. So I asked seven of them if they would write their stories. They're personal stories and I have to say, it'll bring a tear to many and I. To read these things and to read how these people, their families were devastated and then they got better and it's always great to see that.

And we're actually just finishing the next book, which is going to be about brain aging and what we can do in fact, to have angels brain. Basically they get to a hundred with no problems whatsoever with your brain. So there's a lot of new information on this, a lot of new things that we're coming up with. And one of the interesting things that's come out actually is this phenomenon of your rewiring of your amygdala. You mentioned the amygdala earlier so that you have this kind of constant stress threat feel. And then there's going to be more and more about how to rewire that for better outcomes and for better cognition. So those are some of the sites you can go to get more information. And again, I would hope that we can really see a dramatic decline. in the global burden of dementia in the upcoming years.

**SHAWN STEVENSON:** Amazing. Thank you so much really for sharing all these insights for doing the work that you're doing. I know that it's been a labor of love to say the least. And thank you so much for putting these resources together for us. For me, even hearing about this new project, that's incredibly inspiring, a hundred years and having great cognition. And the thing is, there are examples of people who are already living and doing that right now.



And yeah, it's just exciting. So everybody make sure that you stay connected to Dr. Dale Bredeesen. I appreciate you so much for coming to hang out with us.

**DR. DALE BREDESEN:** Great. Thanks so much for having me on. Great to talk to you.

**SHAWN STEVENSON:** It's my pleasure. Thank you so much for tuning into this episode today. I hope that you got a lot of value out of this. This is so important to share this information out, to share this education. Shockingly, even though this issue has crept its way into about to crack the leading five cause of death in the United States, in some countries, again, as he shared in the UK, it can be up to the second leading cause of death. Most people still are not aware that these epidemics are taking place and we've got to get this education out, number one. And also, there are solutions that exist for people who are suffering right now for families that are suffering. And again, we are just getting going on this incredible week dedicated to dementia awareness. But we're not coming in here just about awareness. We're coming here with solutions. We're coming here with resources and that's what this is really about.

So we've got another episode in store for you this week with another incredible guest. To share more on this subject matter. To keep up leveling this education. But right now it's your opportunity to share the education, to share the love, to share the knowledge. to share the empowerment. So I encourage you to share this out with your friends and family. You can send this directly from the podcast app that you're listening on, of course, as a DM, or of course you can share this out with your audience or friends and family on social media as well. Take a screenshot of the episode, share it out on your Instagram story. Just help to get this information out into more people's hands and more people's hearts.

We've got some epic masterclasses and world class guests coming your way very soon, including another powerful episode dedicated to this subject matter, to Dementia Awareness Week. So make sure to stay tuned, take care, have an amazing day, and I'll talk with you soon. And for more after the show, make sure to head over to [themodelhealthshow.com](http://themodelhealthshow.com). That's where you can find all of the show notes. You can find transcriptions, videos for each episode. And if you've got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome. And I appreciate that so much and take care. I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.