[Transcript] The Diary Of A CEO with Steven Bartlett / The ADHD Doctor: “I’ve Scanned 250,000 Brains” You (Steven Bartlett) Have ADHD! & Coffee Is Damaging Your Brain!!! Dr Daniel Amen

Create more possibilities for your family. Fidelity is here to help when it comes to money decisions like everyday spending, buying a home, and building emergency savings. Para tu familia, siempre mas. Get started at Fidelity.com slash mas. Justin Bieber, Muhammad Ali, Miley Cyrus, and then there's murderers, rapists, arsonists. I probably have seen more brains than anybody in the world and now your brain. So this is gonna be really hard for you. You have ADHD. Really? Dr. Daniel Amon, the world's leading expert on the brain. Dr. Amon's mission is to end mental illness by creating a revolution in brain health. Buckle up Dr. Amon, let me know what you see. The brain is involved in everything you do and after today you will always care about your brain. What things make the brain worse? Drugs, alcohol, not getting good sleep, sugar, fruit juice, getting a soccer ball with your head. Caffeine. Caffeine? It shrinks it. What's bad about sugar? You're more likely to get obesity and as your weight goes up the actual physical size and function of your brain goes down. That should scare the fat off anyone. And then there's social media. If you're on three and a half hours a day you begin to wear out those pleasure centers that bring you happiness and they bring you pleasure and they bring you drive. You thrill them to death. But you're not stuck with the brain you have. You can make it better. I can prove it. So it starts with let's look at my brain. Let's do this. We have evidence of and that's normal in our society. The problem is two or three of those can impact the rest of your life and nobody knows about it. I find it incredibly fascinating that when we look at the back end of Spotify and Apple and our audio channels the majority of people that watch this podcast haven't yet hit the follow button or the subscribe button wherever you're listening to this. I would like to make a deal with you. If you could do me a huge favor and hit that subscribe button I will work tirelessly from now until forever to make the show better and better and better and better. I can't tell you how much it helps when you hit that subscribe button. The show gets bigger which means we can expand the production, bring in all the guests you want to see and continue to do in this thing we love. If you could do me that small favor and hit the follow button wherever you're listening to this that would mean the world to me. That is the only favor I will ever ask you. Thank you so much for your time. Dr. Amen. If someone's just clicked on this podcast and they're considering sticking around or maybe doing something else with their time can you explain to me based on what you know that we're going to be discussing and the subject matter we're going to be discussing and how important it is the benefit to their life if they stick around. Ten extra years of cognitive performance in their life. Better love, better money, better health because your brain we're going to talk about is involved in everything you do. How you think, how you feel, how you act, how you get along with other people and my goal is to end it's going to sound huge and it is and it's going to sound impossible but it's not. My goal is to end mental illness by creating a revolution in brain health. I

hate the term mental illness, it shames people, it's stigmatizing and it's wrong. These things aren't mental disorders, they're brain disorders. If you get your brain healthy, well your mind tends to follow. So you're depressed and anti-depressant is not doing one thing for getting your brain healthy. Nobody's talking to you about your diet, your level of exercise, your sleep, not living in a mold-filled home, not really allowing your kids hit soccer balls with their head because that's not brain healthy and if we can create this revolution in brain health the incidence of mental health disorders will go down by half.

I guess that's part of the reveal here is you've actually scanned my brain and you're going to tell me today the results that you have on your laptop over there in the corner of the room. I came to your clinic in Los Angeles and they made me do a test on a computer. It was almost like a speed test of sorts and then they made me lie down in a big machine for about how long was that? About 15 minutes. Well this big machine rotated around my head and looked at my brain. That was my experience of what happened and then I filled out some questionnaires about myself and my brain and my life generally and from that all that data feeds into the thing you're about to show me now. Yes, so I never will make a diagnosis from a scan. I make a diagnosis from all the information which is why we had you fill out all that information and I gave you a test called the Connors Continuous Performance Test which is a 15-minute test of attention and every time you see a letter you hit the spacebar except when you see the letter X. When you see the letter X you don't do anything so it measures impulse control and inhibition, response time and you actually did fine on the test. But there's other evidence that you might in fact have ADD or ADHD from getting bored easily to poor handwriting being disorganized and so on and obviously you're very bright but struggled a bit in school. So with all of that information first thing to do is look at a healthy scan so we know what a healthy scan looks like and we're going to show it in two different ways. We're going to look at the outside surface of your brain so a healthy one is the image on the left and all we should see is full even symmetrical activity. So the image on the top left is looking underneath the brain so the top is the front part of the brain, the bottom is the back, the top is an area called the prefrontal cortex, hugely important in humans, largest in humans than any other animal by far. It's 30% of the human brain, 11% of the chimpanzee brain and then the back is the cerebellum, back bottom part of the brain, again very important involved in processing speed. The bottom right of the images on the left is looking down from the top, the other two looking at the brain from the side. Color doesn't matter, it's the shape. It should be full even and symmetrical. The images on the right, the color matters so it's what we call our active images, blue is average activity, red is the top 15%, white is the top 8% and you see all the white. So the white is where things are really happening. It's really hot and that's healthy, that's normal and that's going to become very important for you. So if we look at your brain it's a little bumpy and so I'll ask you about toxins. Is there anything toxic in your life? What are toxins? So think alcohol, marijuana, mold, heavy metals in your body, infections and so if it's not alcohol or drugs then I begin to go have you ever lived in a mold filled environment? Maybe we should test you for that. Do you have more mercury in your body or lead in your body than you should? So for example I had very high mercury levels. My brain

sort of looked like that when I first scanned it. It was toxic and I had very high mercury levels, like I never drank, I just don't like it, never smoked, never did drugs but my brain looked toxic and so you then have to go hunt down, well why? And for me it was mercury.
Um decreased activity in your left, prefrontal cortex, so when I think of maybe ADD like symptoms in your life, probably coming from there and decreased activity in your left temporal lobe and you right-handed? Yeah, yeah so that can go with the irritability. What I've seen is that can go with sort of short fuse and your prefrontal cortex is sort of the brain's supervisor, it watches you and your prefrontal cortex is flat and I don't like that and then when I heard you played soccer or when I read you played soccer is very common in my soccer players. Now how long did you play soccer for? Pretty much all of my childhood. And any concussions playing soccer?
I think I had a couple of big headbangs that were significant but not many, nothing that took me to hospital but I had a couple of moments where I pulled off the pitch because like there was a clash of heads. So your brain is soft about the consistency of soft butter, your skull is really hard and has sharp bony ridges. Two or three of those can impact the rest of your life and nobody knows about it because nobody looks, right? If you went in and saw a thousand psychiatrists, say you want to focus better and have better temper, you saw a thousand psychiatrists, two of them would
look at your brain, which I think is insane. So the colors here that I'm looking at, what does the red and the green... So the color really doesn't matter here? Doesn't matter, it's the shape. So when I see this hole, you don't have holes in your brain, but the hole means is less blood flow than is optimal. In fact, I'm going to show you if you do what I ask you to do and we scan you six months from now, that'll be better. I have a program that tells me if you do what I ask you to do, this is what's generally going to happen and if you don't do what I ask you to do, well, this is what it's going to look like five years from now, 10 years from now and you're young. If you get serious about loving and repairing your brain, your 60s, 70s, 80s are going to be amazing because you're going to have a healthy brain. If you go, oh, amen's quack, and I don't believe any of this crap, it's going to be really hard for you because you're not going to have full access to your brain and that's scary. So I know that's sort of a big deal, but I think this is from traumatic brain injury at some point and a bit of a toxin, which may be mold.
When I say mold, our house was very, very dirty growing up. So that's what I assume you're speaking to there and we did have mold around the windowsill sometimes and we had mice and
rats at some point and it was like living in a house that a hoarder had lived in because some of the rooms were just stacked to the ceiling with crap. So I think maybe if you're talking about mold or a toxic brain, I'm guessing that's where it's come from. But once it gets in your body, unless you do something active to get it out, it stays and can continue to cause problems.
And then if we go to the active scan, it's very different than I want it to be. And I know I can make it better, but if we go back to what's healthy, lots of activity in the cerebellum, your cerebellum is sleepy, despite you probably being very coordinated. I need to activate that thing. This is really important to get better activity there. And you have this diamond pattern, so you have ADD and we'll talk more about it. It's a subtype I call over focused ADD, where you can be obsessive when you're really interested in something, but if it doesn't

interest you, it's hard for you to focus. So if you look at this, it looks like a diamond.
And when I see that diamond, I think of past emotional trauma. And I published a big study looking at this 20,000 people, can I separate emotional trauma from physical trauma? And I can with actually high levels of accuracy. And it looks to me like there's sort of a bit of both for you. Do you play racket sports? No, I don't. So that'll be one of my prescriptions for you. And actually, study from England. People play racket sports live longer than everybody else by far. Soccer was on the bottom, like soccer and football were on the bottom, but tennis, table tennis, racket ball, now pickleball, badminton are on the top.
But let's talk about this diamond for a bit. When I say emotional trauma, what comes up for you?
So a few things. The first thing is, my parents were always at war, growing up as a kid in a household where there was so much screaming and negative energy, but then growing up with shame because I was so different from everyone else around me, never inviting friends back to my house in those 16 years that I lived there before I left. So nobody really knew where I lived either. I think of all that stuff when I think about like emotional trauma.
Well, that's a lot. Okay. Yeah. I mean, if you grow up in a stressful environment, move in a hostile environment where your parents are at war, it trains your brain, your emotional brain to become hyperactive because you always have to watch for danger. And that gets programmed early and even later when there's not the danger, your body still can look for you're waiting for that next bad thing to happen.
And do you think I have ADHD? I do. Now the question would be who has it in your family? Because it doesn't just show up, but often children who have ADHD have one or both parents who have it. And you can see those similar traits.
And it sounds like one or both of your parents could have been a little bit conflict seeking.
My mother. And if I was to hazard a guess at which one of my parents had ADHD, and this is just me guessing, not trying to diagnose my parents, I would say it would have been my mother. Why? She's the most irritable. Handwriting isn't great. She is a little bit more sort of like scattered, I should say. She's a lot more messy. My dad is like very organised with everything. My mom's very, very, very messy like me. The other thing I would ask is what did teachers
say about you? I went back to speak at my school to the GCSE and A level students. I've done it twice.
And I remember one of the teachers came up to me, bear in mind at the age of 24, 25 years old, and she said, you are a useless student, but you're a nice person. I was never swearing or throwing chairs, but I was useless. And I spent most of the time in the exclusion unit, which is where you go if you don't do your homework or you don't attend. I just couldn't sit in classrooms. I couldn't sit in classrooms and stay focused on what they were telling me, especially when I wasn't interested. That's been like a defining quality of my life. I'm exceptionally good at not doing things I'm not interested in. And I'm good at when I'm interested, but when I'm not interested, I could see my peers almost like will themselves to engage in things they're not interested in. I could never do that. And I've always said I'm a remarkable quitter. So you think about stop going to school, then went to university for one day and was like, nope, never went back after that first day. So it's a very important piece of advice

for people who have ADD is pick something you love, not a job that you think you'll just make more money in. And that's another sort of piece of the puzzle that completely fits with having ADD. And as we know, there are problems with it, but there are also huge benefits of it.
Your prefernal cortex, when it works too hard. So I imagine if I scanned your dad, that it would be busy because he's very organized and like collecting.
But there's less creativity that goes with the busy frontal lobes.
When they're a little bit sleepy, you entertain all sorts of thoughts and you're a little less rule bound than people whose prefernal cortex more active. They like rules and they like sameness and they like predictability. And probably like some of that because I think you inherited some of your dad, that's the top of the diamond. But you're obviously very creative.
I do think of myself as being a creative entrepreneur. I know other entrepreneurs that are like really good at finance and operations and processes. Whereas my skill in entrepreneurship has always been the creativity. That's why I'm a marketeer. That's where I built my fortunes per se was in marketing and creativity. I've always found other people to do the finance or the process or operation stuff for me because that's not where I'm engaged or all where I think I'm particularly good. Since a lot of CEOs listen to this podcast, a lot of CEOs have ADD of one form or another and they thrive when they hire people who are organized. So it's very important because we tend to like to hire people like ourselves and it's very important to hire people who help us where we're more vulnerable.
It's almost like hiring people with different brains.
Yes.
Literally.
Yes.
We talked about something a second ago. You said when you saw your brain for the first time, it changed your life. I do feel like that now. I do feel like when I almost didn't realize my brain was there and I think a lot of people, we go through our lives just kind of because we never see the thing. We don't appreciate the thing. So step one is that awareness. And then step two is the realization that we can do something about it because I grew up thinking that your brain and your body generally is just, it just is what it is. Like I can't do anything about, you know, I tend to think I can't do anything about, I don't know, my fingernail.
I probably, you can, but you just see these things as static objects that are what they are.
This idea that I can do something about it is the most important idea. It's the empowering idea and that is what you're telling me is possible. I can change my brain.
It's the most exciting lesson that I've learned. You're not stuck. I'm not stuck with the brain I had. You're not stuck with the brain you have. You can make it better. I can prove it. In fact, every day what I've come to believe, you're making your brain better or you're making it worse by what you're doing.
What things make the brain worse? What are the common things that most of us do without thinking that make the brain worse? When my daughter Chloe was in second grade, I went to her classroom and I wrote 20 things on the board and I went separate them for me. Good for your brain, bad for your brain. Seven year olds. They got 19 out of 20, right? So most people know. The only thing they got wrong was orange juice. They put it in the healthy category

when, in fact, when is it rational to unwrap fruit sugar from its fiber source? Because it turns toxic in your body. So I'm not a fan of fruit juice. I'm a fan of fruit, not fruit juice.
But so the bad category, hitting a soccer ball with your head. No, don't do that.
What's bad about sugar for the brain? It's pro-inflammatory.
What does that mean? It makes you diabetic. But I mean, as it relates to the brain,
why is orange juice or the ice cream bad for my brain?
Because it's ultimately going to give you high blood sugar levels,
which erode your blood vessels. And you're going to have lower blood flow to your brain.
That's a bad thing. I mean, there's so many things about it. So it's addictive. It's pro-inflammatory.
It makes it more likely you're going to have diabetes and obesity. So 72% of Americans are overweight, 42% are obese. I've published three studies on 35,000 people. As your weight goes up, the actual physical size and function of your brain goes down. That should scare the fat off anyone. I used to be chubby. But when I figured out that connection, I'm like, oh no. It was that that gave me the motivation to drop about 25 pounds. And so sugar is the gateway drug to diabetes and obesity. And so not to mention inflammation, which is the cause of depression and dementia. So I've got sugar. I've got a head injury. I'm going to avoid both of these things.
What else should I avoid? And then you have low blood flow in those two very important areas.
And so how can we increase blood flow? So you want to avoid things that cause low blood flow, caffeine, nicotine, caffeine, constricts blood flow to the brain. And what does that do to my brain?
Well, constricts blood flow. So you're going to get less blood flow. And remember,
I showed you that progression with age? No, you don't want that. You want to do things that increase blood flow to your brain. So exercise. Ginkgo is just one of the supplements I'm going to give you. Eat foods like beets, oregano, rosemary, cinnamon, they increase blood flow.
And do you think there's correlation or a link between caffeine consumption and a shrinking brain?
Yes. And a shrinking brain, is that associated with things like dementia?
Aging brain. I don't think there's a connection. I haven't read any research that says there's a connection between caffeine and dementia. There's a connection with sleep problems,
and there's connection with sleep problems in dementia. I think if you have like 100 milligrams a day of caffeine, it's probably fine. But one venti Starbucks coffee,
it's got 330 milligrams of caffeine. And people just aren't thinking about the level of caffeine they're having in our society. What are the other very obvious things that are not good for my brain? Because I really want to make sure that I avoid those things.
So erectile dysfunction. So B is for blood flow, right? While we're on blood flow,
40% of 40-year-olds have erectile dysfunction. 70% of 70-year-olds have erectile dysfunction.
What that means, if you have blood flow problems anywhere, it means they're everywhere.
And so I'm like, no. And it means either you're too sedentary, you're overweight,
you're smoking, or having too much caffeine, or using marijuana because marijuana lowers blood flow to the brain. And so just in that one of the 11, it's exercise, ginkgo. And for you,
not for everybody, but for you, hyperbaric oxygen, those three things will make a big difference in blood flow. Ginkgo. Ginkgo. What is that? It's a supplement. What does it do?
Increases blood flow to the brain. The prettiest brains I've ever seen take ginkgo.
There's actually a spec study. They gave people 120 milligrams of ginkgo twice a day.

Significant improvement in blood flow to the brain. And so in one of the supplements I'm going to give
you, we have ginkgo. I've taken it every day for the last 20 years, at least. And then this is where the U.S. government got an F for the pandemic. Loneliness accelerates dementia and brain problems.
And so when they isolated us, the whole significant increase in brain problems.
So get connected to other people. The I, in bright minds, is inflammation. So what increases inflammation? Low omega-3 fatty acid levels. And we are deficient. 93 percent of the population is deficient in omega-3 fatty acids. 93 percent. So all of us should be either eating more fish or taking an omega-3 supplement like fish oil. Gum disease. Like, who knew? Like, I wasn't really that good at taking care of my gums until I started reading the studies. You have gum disease, you have inflammation. You're more likely to get depressed and have dementia. I'm like, oh my goodness.
So I'm a flossing fool. H is head trauma. We talked about that. I did the big NFL study when the NFL was struggling with the truth on traumatic brain injury and football. 80 percent of our players got better. Teas toxins, drugs, alcohol, but other things like mercury. What are the unobvious toxins? Anesthesia. I was looking at my bathroom items and I have, like, mouthwash and toothpaste and deodorants and aftershaves. And I was wondering to myself whether those were toxic to some degree. So there's an app, there's a couple of them, but the one I like is called Think Dirty, where you can scan those products and it'll tell you on a scale of zero to ten how bad they are for you. So zero is you live a long time and ten is you die early.
And so when I figured this out and I'm scanning everything, I mean, it cost me hundreds of dollars to replace things. And my wife, more than that, with all the makeup and stuff, but I shaved for 50 years with barbisol. And it's a nine, which is die early. And now I shaved with something called Kiss My Face. And it's a two. It's like, you know, we teach people read the labels on food stuff, should read the labels on anything that goes on your body or on your child's body. And we have this epidemic and we'll get to it of low testosterone in males because of the toxins we put on their bodies when they're young. So the M is mental health. It's the quality of your thoughts, the level of your stress, and the level of trauma you carry in your body. And whether or not you have any of the psychiatric stuff, like depression, for example, doubles the risk of Alzheimer's disease in women and quadruples it in men. And so the M is what's going on in your mind. And so I teach people to kill the ants, the automatic negative thoughts that steal their happiness.
Understand and process their traumas and treat whatever psychiatric issues may be present, like in your case, the ADD. And I think we start with a supplement or even consider medication, talk about the natural ways to do it, the medicine ways to do it. And for me,
I'm not opposed to medicine. I'm actually really good at it. But it's never the first and the only thing I think about. I've really never taken medication in my life. Even like if I get a headache, I don't take medication. I'm not the type of person. I probably haven't taken a pill in like really years. The only time I've taken medication is if I have a severe infection of sorts. So like there was this one time where like my foot was going green and I'd stood on some glass, whatever, and it was really getting out of control. I'm talking like a two inch purple thing growing on my foot. I thought, okay, instead of getting my leg cut off, I'll take this medication the doctor's

given me. Otherwise, I just do not take it. So I will rather go through severe pain than take medication because I believe that my body can fix things. So when I think about taking ADD medication or ADHD medication, I don't really know the difference. I go, well, if my if I'm messy, or if I'm my handwriting is bad or whatever it might be, then that's just who I am. And that's okay. I can get better at it. I can be less I can be more organized. But why why do I want to take medication? I'm not going to I'm not going to be the one to sell you on medication. But what I would say is so a lot of times people ask me the side effects of medication. And for stimulants for ADD, it could be a decreases your appetite or can negatively affect your sleep. But you always have to ask the second question, which is what are the side effects of not taking the medicine? What's the impact on your life on your business on your money on your relationships on your health? Because living with untreated ADD for many people, and maybe not you, but for many people, it goes with chronic stress, because of the negative things that tend to go along with it.
The dysfunction and for you, you're clearly not broken. But are you optimized? Do you have full access to your own brain? And I would argue no. And we can do and we can do better.
But we can do it in steps. And ultimately, I see my job is giving people options, and then telling them the pros and cons of each option, and then letting them choose, right? I mean, that's what good doctors should do. It's called informed consent. And I can just tell you my experience. I told you the story with my daughter, and I've seen that play out thousands of times that people just become more optimized. And it's not necessarily the medicine, but that medicine, when it's for the right brain, right, the wrong brain, it makes people worse.
And if you read my book, Healing ADD, I talk about the Ring of Fire ADD. So ADD and ADHD are different terms for the same thing. 1980, the American Psychiatric Association's DSM Diagnostic and Statistical Manual of Mental Disorders. I hate that. But it's what we have was attention deficit disorder, ADD, with or without hyperactivity. 1987, God knows for what reason they changed the name to ADHD, attention deficit hyperactivity disorder, basically throwing out half the people who had it. Because half the people who have ADD or ADHD are never hyperactive.
And they don't get diagnosed because they don't bring enough negative attention to themselves for parents to go, you have a problem, and you're giving me a problem. So anyway, different names for the same thing. And if you can manage it by having extra help for the things you're not good at with exercise, with all of the good habits you have, well, that's awesome. If you want to be 10% more focused, like I treat this writer, and she only takes medicine when she has to get stuff done. But she never takes it when she writes, because she has 16 plot lines going on at once in her books. And she goes, no, I think it decreases my creativity a little bit.
Interesting. Because the fact that we're medicating a brain like mine, I go, is that for professional optimization? Because if you just go back, like, I don't know, a couple hundred years, if you go back even further to a time when we couldn't read or write, there wasn't computers and all of these things, you would have had no idea that, you know, if you go back far, you wouldn't have been able to tell a really an ADHD, well, what I'm trying to say. But you'd be able to tell their life. I mean, I have a patient from Ethiopia. And I'm like, so tell me the impact in your culture. And he said, the people with severe ADHD get excluded because they can't be relied on. And the isolation causes great shame and pain.

And they have no idea it's a brain thing.
Where does it come from ADHD or ADD?
Well, it's genetic. It's clearly genetic. I mean, if I don't see it in someone's family,
I think head trauma. And with you, I think that's possible because of soccer,
except you see it in your family. Is it a defect or is it a difference?
It's a difference.
If I chose to take a drug, was it like you called it Ritalin?
So Ritalin would be one of the options.
Whatever drug it was, what exactly would it do under brain scanning to my brain? So if I scanned my brain and took the drug, what would you see in my brain?
Well, I can tell you, it would activate your cerebellum.
Okay, that was a bit sleepy.
It was a bit sleepy and it would activate your prefrontal cortex.
And it would give your brain better energy.
So my first spec scan, 1991, a woman tried to kill herself the night before.
I went to the lecture on brain spectimaging and then I walked out of the lecture and she was my new patient. Her name was Sandy, tried to kill herself the night before.
And as I'm getting to know her, I'm thinking she has ADD.
She's an eight-year-old son who has ADD, talked about the genetic connection.
She had an IQ of 144, but never finished college.
And I'm like, how'd you study? She said, well, I never really did,
except maybe the night before a test I'd put on a pot of coffee,
stay up all night cramming, and then I'd take the test.
That's a classic ADD way of doing things.
And I'm like, you know, I think maybe you have adult ADD.
And she goes, oh, adults don't have ADD.
And I'm thinking, I'm the doctor.
But I'm like, how about if we look at your brain?
And I knew from other work I'd done that I should do it twice at rest and concentration.
And when she tried to concentrate, her brain completely deactivated, turned off.
Like for you, well, I did it once, but if I had done it twice,
probably your brain would be busier at rest.
And then when you try to do it, it would drop.
And I put the pictures on a couple of days later,
I put the picture on the table in front of her.
And as I explained it to her, she started to cry.
And she said, you mean it's not my fault.
And I said, having ADD is sort of like people who need glasses.
And I wore glasses to drive and took my glasses out, put them on.
And I said, people wear glasses, aren't dumb, crazy, or stupid.
Our eyeballs are shaped funny.
And we wear glasses to focus.

I said, people have ADD, aren't dumb, crazy, or stupid.
Some of them are the brightest people I know, but their frontal lobes deactivate.
Taking the medicine is like glasses for your frontal lobes help you focus.
And she did it, she was conflict driven.
She's always poking her husband.
They got into a huge fight, which is why she tried to kill herself.
She stopped that.
She's a better mom.
She went back and finished college.
I mean, her life's, it's like your brain with glasses.
Wow.
My friends that take medication for ADD say that to me.
They say it's like their life is before and after that moment.
So I've, you know, I completely believe what you're saying.
A second ago, you said this phrase when we were talking about the M,
which is your mental health and the impact that has on the development of a brain
that's either healthy or unhealthy.
And you said this thing about, you've got to make sure you kill the ants,
which is killing those negative thoughts.
That's much easier said than done.
How does, how does someone go about killing their negative thoughts?
Is there a process they can go through to do that?
Yeah, it's a habit, right?
And it's not hard.
But like any habit, you have to do it repeatedly.
Like over and over and over and over and over and over and over.
Whenever you have a thought, your brain releases chemicals.
Whenever you have a bad thought, a sad thought, a mad thought,
your brain releases a certain set of chemicals that make you feel bad.
Immediately your hands get cold.
They start to sweat.
Your hands get cold.
They start to sweat.
Your muscles get tense.
You start to breathe erratically.
And it all happens instantaneously.
Whenever you have a positive thought, happy thought, a hopeful thought,
a loving thought, like I'm back because I love the first time I was on the podcast with you.
A completely different set of chemicals come out
and your hands get warmer, drier.
Your breathing slows down.
Your heart beats in a healthier...

And it happens like immediately.
People have ADD, since we're talking about that,
they tend to go more toward negative thoughts
because negative thoughts are more stimulating.
And here's the exercise.
Whenever you feel sad or mad or nervous or out of control,
write down what you're thinking and then ask yourself, is it true?
Is it absolutely true?
This is a process I learned from my friend Byron Katie.
How do I feel when I have this thought?
How do I act when I have this thought?
And what's the outcome of the thought?
So is it true?
Is it absolutely true?
How do I feel, act, and the outcome of the thought?
How would I feel if I didn't have the thought?
How would I act if I didn't have the thought?
What's the outcome of not having that thought?
Then my favorite part of it is take the original thought.
Tana never listens to me.
Tana's my wife.
I've had that thought.
And then turn it to the opposite.
Tana does listen to me.
And then just ask yourself whether or not that's true.
And by directing my thoughts, by managing,
so rather than being a victim,
so many of my patients are victims of their thoughts
until they do the work, right?
This is one of the things where do what the FI say.
Write down 100 of your worst thoughts.
Take them through that process.
And by the time you get to 30, they'll stop bothering you.
So if I'm a repetitive negative thinker
or a repetitive positive thinker,
does that alone change the shape of my brain?
Yes.
And in my new book, Change Your Brain Every Day,
there's actually pictures of Noelle Nelson.
She was writing a book called The Power of Appreciation.
And I had her, she wanted me to scan her
while she was appreciating her brain.

And it looked beautiful.
And I'm like, as I'm showing it to her,
I'm like, you need to come back tomorrow
and I want you to hate yourself.
And she goes, oh, I don't want to do that.
I'm like, come on, you have to suffer for science.
And I said, we have a positive scan,
and then we had a negative scan.
And the negativity dropped.
Dropped her left temporal lobe, her left frontal lobe,
and her cerebellum.
It's so interesting.
I mean, similar to what your scan looks like,
but hers was way worse.
I mean, it's a healthy brain and then a deactivated brain.
And that explained to me athletic slumps.
It's like, why do people get in athletic slumps?
Because negativity turns off their cerebellum.
And they become just a little less coordinated.
And I'm not a fan of positive thinking.
I'm a fan of accurate thinking with a positive spin.
So positive thinking is I can have this third piece of cheesecake,
and it's not going to negatively impact my body or my brain.
Like, no, don't worry, be happy people.
Die the earliest of accidents and preventable illnesses.
So a lot of people come to me for anxiety.
And I'm like, so on a scale of 0 to 100, how much is it?
I'm like, 50.
I said, okay, our goal is not zero.
Our goal is 15.
I want you to have enough anxiety.
You do the right things.
Somewhat linked to that is a word you used as well, which is stress.
When we're talking about the M in bright minds, how to have healthy brains.
What role does stress play on our brains?
Stress, especially chronic unremitting stress.
So if we think of the stress you had growing up, where there was a lot of fighting,
it raises a hormone called cortisol.
Cortisol begins to shrink activity in the hippocampus,
one of the major memory and learning centers in the brain.
So one could at least argue or postulate your struggle in school
was because your emotional brain was busy because you were worried about things at home.

It makes it more likely you get infections.
It makes it more likely that you have learning problems.
And trauma.
Trauma was the other word you used, which I thought was worth diving into.
The impact that trauma has on our brains.
And does trauma show up when you scan someone's brain?
Can you see it?
Yeah.
So trauma shows up as that diamond pattern, which is why I asked you about it.
It's your emotional brain and to your singular at the top.
It's the brain's gear shifter, thalamus, often involved in mood,
basal ganglia, migtal involved in anxiety.
So we often see worry, anxiety and sadness.
And it shows up as that diamond pattern that after people do EMDR,
a specific psychological treatment for trauma calms it down.
And I say psychological treatment.
I'm like, yeah, but it has biological effects.
It's a very interesting treatment.
So I get you to like first thing, write down 10 big traumas in your life.
And we'll go after the worst one first and have you bring it up.
And there's a whole process to it.
I have your eyes go back and forth while you bring it up.
And it's so interesting.
The connections your brain will make to it.
But as you process it, you find you're actually less bothered by it.
And it's masterful single incident traumas,
like being robbed or being in a car accident.
For chronic trauma, it takes longer.
But it's so helpful.
When I met my wife 18 years ago, her ACE score,
adverse childhood experiences on a scale of zero to 10,
how many bad things happened to you was an eight.
And I was so taken with this woman.
And one of my first gifts to her was 10 sessions of EMDR.
One, I wanted to see if she would like wrestle with her traumas.
She went for two years.
And I'm absolutely convinced that's one of the reasons she and I rarely fuss with each other.
Because we don't trigger each other.
And when you talk about trauma, it's not these big T traumas
that some people sometimes talk of, which is,
you know, when I was young, I was fondled by my uncle, for example.
It can also be an isolated incident that happened when you were an adult.

Absolutely.
It can be anything that attacks your sense of safety,
either physical or emotional.
Getting fire is traumatic for a lot of people.
Not performing in a high, in an important situation can be traumatic.
And that changes the activity within your brain.
Well, it depends on how strong it is.
If it was really strong.
If it was really strong.
Then the activity centers of your brain would change.
Well, and there's one thing we haven't talked about yet called brain reserve,
which is how healthy was the brain that you brought into trauma?
Because you can take two soldiers, put them in the same tank,
and expose them to the same blast, the same angles.
Everything is the same.
One walks away unharmed.
The other one's permanently disabled.
Why?
It's the brain they brought into the trauma.
And so if your mother used drugs while she was pregnant with you,
she decreased your reserve.
If your mom and dad fought a lot or they separated when she was pregnant with you,
that decreased your reserve.
If she gave you bad food, if she neglected you,
if there was chronic stress, that's decreasing your reserve.
So all of us have a certain level of reserve when we go into that trauma.
And some people get post-traumatic growth that they're actually better after the trauma.
They make the trauma and makes something meaningful out of it.
And other people have post-traumatic stress where it really causes them to suffer.
So I'd love the idea of brain reserve because I'm always thinking of boosting mine.
Yeah, because then also when something traumatic happens, I'm in a better place.
Right.
Like if you kill the ants, if your ant population is low.
My automatic negative thoughts.
Right.
Yeah.
So if you're a masterful, if you have an ant eater running around in your head,
cleaning up the negative thoughts that all of us have,
when you go into that trauma, you're just better able to deal with it than if you have an
if you have an undisciplined mind that's infested.
And there's nowhere in school that people teach you to kill the ants.
We have a foundation called the Change Your Brain Foundation.

And I love it so much.
We're dedicated to research, education, service.
But last year, we produced this new course called Brain Thrive by Five.
So it's for preschoolers, kindergarten, grade one,
where we teach kids to love and care for their brain.
It's like 30 modules or six to seven minutes long.
And six of them are learning to kill the ants.
And little kids just love that.
You don't have to believe every stupid thing you think.
And I don't know if you know, but Jerry Seinfeld once said,
the brain is a sneaky organ.
We all have weird, crazy, stupid, sexual, violent thoughts that nobody should ever hear.
And just because you have a bad thought doesn't even mean you believe the thought.
Right?
It's not the thoughts you have that make you suffer.
It's the thoughts you attach to that make you suffer.
I get all sorts of crazy thoughts and I'm like, my brain is so creative.
But I don't believe most of them.
Quick one.
I just want to talk to you about our sponsor super quick called LinkedIn Jobs.
Hiring is one of the most important steps in your business.
And without good people, there is literally no company.
Trust me.
I found out along the way that your business is nothing without good people.
You want to be 100% certain that you have access to the best candidates available.
And that's why I need you to check out LinkedIn Jobs.
LinkedIn Jobs helps you to find the right people for your team faster and for free.
So when I'm expanding any of my teams and any of my companies,
I go straight to LinkedIn and I'd highly recommend you do the same.
There are simple tools like screening questions,
which make it easy to focus on candidates with the right skills and experience.
So you can quickly prioritize who you'd like to interview and hire.
It's why small businesses rate LinkedIn Jobs number one
in delivering quality highs versus leading competitors.
LinkedIn Jobs helps you find the qualified candidates you want to talk to faster.
Post your job for free at LinkedIn.com slash DOAC.
That's LinkedIn.com slash DOAC to post your job for free.
Terms and conditions apply.
As you'll know, this podcast is sponsored by Huell.
And one of my favorite products that they've ever created is their Huell Daily Greens.
It actually performed so well when we released it that it sold out completely.
And the only thing I'm back here to say to you guys is that it's now back in stock.

It tastes amazing.
And it's actually got 91 vitamins and minerals and whole food ingredients in one scoop.
It's nice not to have to think about taking lots of different pills and vitamins in the morning.
I can just take this and I know that I'm giving my body a good dose of all the vitamins and minerals that it needs every morning.
It's a lot better tasting than having to force down some of the other green powders I've tried.
And it's really reassuring to know that I'm looking after my body properly.
Unfortunately, and currently, this product is only available in the US.
So anyone in the USA, head to Huell.com to get it before it runs out again.
But anyone that's not in the US and wants it to come to their country,
please send me a DM, a direct message.
And I'll speak to the team at Huell in our board meetings
and I'll let them know that you want it in your country.
Tell me about the most unhealthy brain you've ever seen.
For a 15-year-old, it was Kip Kinkle.
He's a 15-year-old boy in Springfield, Oregon, who brought weapons to school, got arrested.
His parents picked him up from jail.
And sometime between six o'clock that night and eight o'clock the next morning,
he murdered his mom and dad.
And then he went to Springfield Thurston High School in Springfield, Oregon,
and shot 25 people.
Based on my work, they scanned him for his trial.
His brain was so awful.
Like, I'd never seen a 15-year-old that had a brain so damaged.
And his life reflected it.
What did you see in his brain?
It was shriveled.
At 15?
At 15.
And it's like, okay, why?
Well, he murdered his mom and dad, so I couldn't get a good history.
But he either had anoxia at birth, lack of oxygen, a severe infection,
or something was poisoning his brain.
It could have been lead, it could have been an infection.
I mean, we were talking about M, the I is immunity and infections.
It's a major cause of psychiatric problems.
Nobody knows about it.
Have you scanned the brains of lots of psychopaths?
I have.
And what do you see when you look at psychopaths?
So I published a study on murderers.
And young murderers have really low frontal lobe function.

Older murderers, it's global, low activity.
Now, not all murderers are the same.
I have one murderer's brain.
Her brain actually looked pretty good.
But she was in the middle of being abused by her husband, and she murdered him.
And it wasn't that irrational, you know, when you really know her story.
But most brains are troubled.
Do you think you could look at a brain and predict?
Now, you should ask me, should you scan presidential candidates?
Interesting.
Especially now.
What do you think Donald Trump's brain looks like?
Well, I think if we scanned President Biden or former President Trump,
neither one of them would be healthy.
I mean, one, we talked about the older you got, the less healthy they are.
And if someone is going to have nuclear codes, shouldn't we know what their brain looks like?
And I wrote an op-ed piece in 2008 when Barack Obama was running against John McCain, arguing don't you think we should scan presidential candidates?
And yeah, I don't think either one of their brains would be healthy.
And that concerns me because, I mean, what do we need for our top politicians?
Judgment, forethought, impulse control.
Okay, so playing devil's advocate to that, if we started to do that at the very highest office in the land, then that philosophy might creep down to lower offices in the land.
And when you go and try and get a job at, I don't know, a restaurant or a marketing agency, it might become the norm that there's a almost brain discrimination or brain prejudice in play where someone like me, they have their brain scanned, they go, listen, this guy's, he's not going to be very good at focusing on things.
It's an interesting question.
I have to tell you, if you date one of my children for more than four months,
I'm going to get you scanned.
I'm going to figure out how to do that.
It's the rule in my family.
And if you have a bad brain, it doesn't mean you can't come back.
But are you smart enough to fix it?
That would be the question.
Have you done that?
Well, my son-in-law, Jesse, who I love, his mother has paranoid schizophrenia.
I'm like, I want to scan your brain.
And I have.
He actually wrote a book called Change Your Brain Before 25.
And he opens the book with the story of his scan and him sitting with me.
He's six-four.

I'm five-six.
And he said he'd never felt so small.
And yeah, no, that's the rule in my family.
Like I said, when I met my wife, I really liked her.
And the first naked part of her I wanted to see was her brain.
And so three weeks into our relationship, I'm like, hey, you haven't seen the clinic.
Don't you want to see the clinic?
She came, I scanned her, and it passed.
Do you use her brain against her?
I bet you do.
I bet you do.
No.
We spoke to Tanner.
She said you do.
You're telling me there's not been one time where you've brought up her brain
in a moment of conflict or arguments, not once, because I will call Tanner.
I don't.
Yeah, no.
Because you know what I do?
And this is on par with killing the ants.
I do an exercise with my patients called the One Page Miracle on one piece of paper,
write down what you want.
And in a very specific way, what do you want in your relationships?
Your work, your money, your physical, emotional, and spiritual help.
What do you want?
And with her, because she's on the top of my list,
I want a kind, caring, loving, supportive, passionate relationship.
I always want that.
I don't always feel like that.
Rude thoughts come into my head.
And if I've slept and I've eaten, I never save them.
Why?
Because it doesn't get me what I want, right?
And that's not selfish.
People go, oh, but you know, what you want is, what I want is not selfish.
It's good.
Because hedonism is the enemy of happiness.
But happiness is a moral obligation because of how you impact other people.
Your brain's so smart, but you have to tell it what you want.
And every major business, including mine, we have a one page strategic plan.
We know what we want and we know what we're going to do this quarter and this year.
But people don't do that in their lives.

And you think they should have like a life plan?
Every person should.
What do you want?
Is your behavior getting you what you want?
Do you think the brain almost conspires to make, to fit what you want?
Either brain, once you're clear on what you want, I guess your actions will change a little bit.
And then your brain will change shape to fit what you've said you wanted.
Yes.
And the brain is lazy.
The brain does what you allow it to do.
And it's habitual.
I was talking to one of my patients about this yesterday.
Because we were working on his one page miracle.
And he's like, you know, I could be more positive.
And I go, it's a habit to be negative or to be positive.
Which highways are you building in your brain?
Positive highways or negative highways, accurate highways or distorted highways.
You build that.
And if you watch the news, they'll become more distorted.
Because it's, yeah, in my book, the end of mental illness, I did something.
It was very fun for me to do.
I imagined if I was an evil ruler and I wanted to create mental illness, what would I do?
And watching the news, I think there's 62 evil ruler strategies.
And I think that's like 12.
Because the news is no longer the news.
The news is about eyeballs and selling things.
And negativity sells.
If I can scare you, that will sell.
And so you have to be very careful with what you allow in your brain.
And yes, you should be informed, but not over and over and over and over again.
People who start the day with the news are 27% less happy in the afternoon.
Well, I listen to lots of true crime and serial killer things, like every day.
Are you telling me that?
It's so funny.
I have this show on Instagram called Scan My Brain.
I take influential people and scan them.
And I did Megan Trainor, the musician, I love her music.
And she goes, I can't sleep.
And every night before bed, she's listening to true crime.
And I'm like, stop that.
Do you think it matters?
Because I listened to true crime before bed.

I have this exercise that I recommend to all my patients.
I've done it for 10 years.
What went well when I go to bed?
I start at the beginning of the day and just go hour by hour,
looking for what went right about my day.
I think that sets your dreams up to be more positive.
I think it's, I do both.
And then I just see which one works better for you.
Every day, when, or learn.
What is the eye in Bright Minds?
Immunity and infections.
So do you know your vitamin D level?
No, but I do take, the only supplement that I take frequently,
I'd say there's two, is vitamin D and omega-3.
Because I'm black as well.
You need more vitamin D.
So people have darker skin and going from Africa,
where there's a lot of sun, to the UK,
where there's no sun, dramatically increase the risk
of mental health problems because of vitamin D deficiencies.
Do you know what?
I think there's a certain member of my family who I won't name,
who went from Africa, they've got two Nigerian parents,
went from Africa to the UK.
And I saw their mental health deteriorate quite significantly
to the point that we believe this person might have bipolar now.
And part of me suspects once I learn about vitamin D deficiency
and people that have darker skin,
this person has very, very, very, very, very black skin,
that it might be associated with that change.
Being in a new country that has no sunlight for 30 years,
when you're black black.
You bet.
And it's part of, so if you see mental health as brain health,
then that becomes a critical intervention.
If you're not paying attention to brain health,
then you're like, well, what, anti-psychotic
or what mood stabilizer can I give them?
And I'm very well may use an anti-psychotic
or a mood stabilizer, but if I get your brain healthy,
you might not need it or you'll need half the dose.
So, and then infections, I mean,

we're just coming out of a pandemic.
And COVID changes your brain in a bad way.
It causes like a inflammatory bomb to go off in your brain.
I was on the Kardashian show last year
because I scanned Kendall.
Kendall came to see me.
And obviously I was on the show, so it was public knowledge.
And it was post COVID and her emotional brain just was on fire.
And that's what we saw with COVID.
And long COVID, emotional brain is hot,
but then the cortex begins to get low in activity.
It's a bad combination.
Why, what does that mean?
It's chronic damage.
And what does that mean in terms of behavior?
What's the implications for behavior?
So the hot limbic brain tense anxiety that she hadn't had.
If you start damaging your cortex and all of a sudden you're sad,
you're impulsive, you're irritable, you can get dark thoughts,
sometimes even suicidal thoughts.
And people got COVID significantly increased in dementia.
Someone who's listening to this right now that is depressed,
clinically depressed or just feels depressive symptoms,
where do you start?
Let's go to the extreme end.
Someone that can't get themselves out of bed.
I sat here with Jada Pinkett and she told me that she was clinically depressed.
And if she just got to 4 p.m. every day, to her that was a victory.
There are lots of people out there that are in that situation.
Right now.
Where do you start with those people?
What advice do you give them?
Because I'm sure you see a lot of them in your practice.
It starts with awareness that maybe this is not me, maybe it's my brain.
And then it starts with loving your brain and then investigating your brain.
Because depression is like chest pain.
So if somebody had chest pain, you're like, well, where would you start?
Well, you start with an evaluation.
You wouldn't start with drugs.
I mean, that would be like ludicrous.
You would like go, why do you have chest pain?
Why are you depressed?

How's your thyroid?
Right?
The person that can't get off the couch, they could be hypothyroid.
Or one of my friends got depressed.
She had anemia.
She had pernicious anemia because it was a B12 deficiency.
I wouldn't assume, oh, you're depressed, take this medicine.
Depression is what it is.
It's not why it is.
And if you don't know why it is, how do you effectively treat something?
Like so many people come to me and they go, I have an autoimmune disorder.
It's like, well, why do you have an autoimmune disorder?
Why is your body so mad at you?
It's attacking itself.
And so-
Because my body's broken.
But why is your body broken?
Right?
And I hate the term broken, right?
It's a series like the broken brain.
And it's like, no, it's not optimized.
Let's optimize it.
I never want my patients to think of them as mental.
And I never want them to think of themselves as broken.
You are awesome.
So how can I help you be maybe 10% more awesome?
People feel like their brain is against them.
It's working against them.
When they're feeling depression or those chronic cycles of negative thinking,
why is my brain attacking me?
Why is it against me?
So part of it is it's not healthy and part of it's undisciplined.
And I got to do a lecture last year for the coaching staff of the Miami Heat.
It was so much fun for me.
And I'm really thinking a lot about elite performance.
And I think it's just such a better model.
It's like, let me help you be your best rather than let me fix you.
And I think someone like you, I mean, it's like, you're already awesome.
How can I make you more awesome?
How can I give you more access to your own brain?
And it's just, it's easier to sell that than, you know, let me give you a diagnosis
of a mental illness.

And then let me give you medicine you have to take for the rest of your life.
This is the wrong model.
The psychiatry is currently operating with really good for the pharmaceutical industry.
Really bad for our society.
25% of the American population is on psychiatric drugs.
That's just horrifying.
Is Ritzel in a psychiatric drug?
It is.
And I'm not opposed to psychiatric drugs?
We're really clear.
I'm actually really good with them.
It's never the first and only thing I think about.
What is the N in Bright Minds?
Neurohormone.
If your hormones that affect your brain, which are all of them, are not optimal,
you're not optimal.
And the DNS?
Like if you're cold when other people are not, we should look at your thyroid.
The D is Diabesity, where you're overweight and or have high blood sugar.
The most common of the 11, 72% of people are overweight.
And as your weight goes up, you have seven of the 11 risk factors.
It lowers blood flow to the brain and prematurely ages.
The brain increases inflammation.
It stores toxins.
It's a bad thing.
And then the S is Sleep.
I've got obsessed with my sleep recently.
I have my Wupon pretty much all the time and they're sponsor of this podcast,
I probably should say, but I'm also like an equity shareholder in the company.
But it's become one of my biggest obsessions in my life is waking up in the morning and
looking at how I slept, how much deep sleep, restorative sleep I've had,
my heart rate variability, all that stuff.
I'm obsessed with it.
What does sleep do to my brain?
I guess you said earlier that it kind of cleans it, cleans it and refreshes it.
Well, we didn't even know that until, it's just 10 or 12 years ago, where researchers
saw that the fluid system in your brain, it's called the glimphatic system,
doesn't open up when you're awake.
But when you're asleep, it opens up and then sort of cleans things, washes things.
And so for those people like me, who I thought I was special because I could get by on four
hours of sleep at night, I'm sort of running around with the toxic brain or dirty brain.
And so...

What are those toxins?
So what is it cleaning?
Have you heard of beta amyloid, which is a cluster of proteins that increases your risk of Alzheimer's disease?
So they build up during the day, the system cleans it.
But if you're not getting good sleep, you have more of a toxic buildup of those kinds of clumping proteins that are problematic for you.
Interesting.
Is there anything else people need to know about sleep in the brain?
Because I think everybody knows sleep is important.
A lot of people struggle with sleep.
Sleep apnea triples the risk of Alzheimer's disease.
One of the big lessons Imogen has taught me that I can actually see the pattern for sleep apnea on a scan and it looks like early Alzheimer's disease.
Bilateral, parietal top back part of your brain decreases.
What is sleep apnea?
Snore loudly, stop breathing at night, chronically tired the next day.
So when you sleep, you're breathing, you have many apnic episodes where you stop breathing.
And so and if you're sleeping alone, you actually might not know it because no one's being woken up by your snoring.
And even people who've been diagnosed with it don't treat it because they don't want to wear the mask at night.
And I'm like, no, you have to treat it.
Otherwise, the worst thing you can do for your brain is starved of oxygen.
That's the worst thing you can do for your brain.
So breath work then must be quite good for the brain.
Breath work is good for the brain.
One of my tiny habits, I have many of them for brain health, is the 15 second breath, eight seconds in, hold it for a second and a half, four seconds out, hold it for a second and a half.
Do that four times, eight times, it'll break a panic attack.
Do it on a routine basis.
It'll increase your heart rate variability.
Breath work will breath work.
Heart rate variability is this metric that I think society, much of society, have suddenly become quite obsessed with, including me.
Me and my friends literally have a heart rate variability contest every morning where we screenshot our heart rate variability and drop it into the chat.
And some of my friends are trying to increase theirs.
One of my friends called Ash, I mentioned him earlier on.
His has been quite low, so he's kind of been trying to get it up.
I guess we're going to have to ask two questions here, which is what is heart rate variability?

And the second question is, how do I improve it in your view?
So again, you can't change what you don't measure.
And now people who wear Apple watches or oar rings or devices that measure it,
heart rate variability is the beat-to-beat variability of your heart rate.
And people go, oh, well, my heart rate should beat the same.
Well, no.
Actually, the more variable it is, bum, bum, bum, bum, bum, bum, bum.
Rather than bum, bum, bum, bum, bum, bum, bum.
I first heard about heart rate variability with babies.
That when a baby is being born, they actually put a scalp monitor on it,
and they look at the heart rate variability of the baby.
And if it's very variable, it's bouncing all over the place, well, it's a sign of heart health.
When it flattens and becomes even, like it's just 70, they go get the baby,
because that means the baby is in trouble.
Doesn't make any sense, does it?
It's counterintuitive.
It's a little bit counterintuitive, but if your heart rate variability is low,
you have a higher risk of anxiety, depression, and heart disease, dinerally.
I mean, there's this huge connection between your brain health and your heart health.
And so meditation increases heart rate variability.
Breathwork increases heart rate variability.
Exercise can increase heart rate variability.
Good sleep and good sleep hygiene can increase it.
Ants decrease heart rate variability.
I stopped drinking alcohol for this very reason.
People don't know this, but I mean, I've probably mentioned it twice now on air,
but I quit drinking alcohol about a month and a half ago, I think.
And part of the reason is when I wore my woop, and then I had, I don't know,
one glass of wine or two glasses or three glasses of wine the day before,
when I woke up the next day, my heart rate variability was like flashing red.
It was 30, 40.
Typically, on a great day, my heart rate variability is 150, 140.
Which is strong.
I know this because I compete with my friends.
But on a day where I had a glass of alcohol, it'd be flashing red and it'd be 40.
Also, if I was sick, it would be 40.
Also, if I had a really stressful, unselected day the day before, it would also be 40.
And the fact that alcohol was causing my heart to respond the same as an awfully stressful,
unselected day or COVID, I thought, fuck, fuck that.
And I've, so that's part of the reason I quit drinking alcohol.
And now that you have brain envy, you're going to have a healthier brain if you keep it away.
Because alcohol lies to us.

Alcohol lies to us.
Alcohol causes damage in the brain.
Really?
Even a little bit of alcohol causes damage in the brain.
It disrupts something called white matter.
So gray matter, nerve cell bodies, white matter, nerve cell tracks.
So white matter is the highways in your brain that transmit information and impulses.
And even a little bit of alcohol has been shown to disrupt the white matter in your brain.
I don't want anything messing with the highways in my brain.
But I love that you measured it.
You made the connection and then you stopped it.
It's a sign of intelligent life because you love yourself.
Alcohol, because there's a lot of people that are sat on the fence right now with alcohol.
They probably don't have a really bad relationship with it.
They're probably not alcoholics, but they kind of just,
they have it because society is constructed in such a way that on a Friday evening,
when the waiter comes over and puts down the wine list,
you just go, oh, I'm getting whatever.
That's who I was.
I was just on the fence.
My friend, one of my best friends was an alcoholic.
So I understand why he quit because he had this really dysfunctional relationship with it
that would ruin his life.
I'm the type of person that would have one drink, two drinks, and then I'd maybe stop.
I didn't feel the need to have three, four, seven, 19.
He was different.
And also because of that, there was no adverse consequences in my life.
So when I went away with him recently,
he's writing a book on alcohol and alcoholism.
He was telling me about the book and I was going,
I personally wouldn't read that book because I don't feel like I have a problem with alcohol.
This was before I quit.
So I was like, what I would love from a book,
this is just me personally, is a book that made the case to people
who are kind of sat on the fence that drink or a beer or a glass of wine,
just because I don't know, society is constructed in such a way where it's hard to avoid.
But they could go for a mocktail if someone gave them some
performance-based evidence that alcohol, just even a little bit, the casual drinking,
actually matters.
So this is where you come in, Dr.
One of my biggest Instagram posts was I told you so.
The American Cancer Society came out and said,

any alcohol increases your risk of seven different types of cancer.
And I've been talking about this for 30 years because I have scans and people who drink any alcohol have lower activity than people who don't drink at all.
And obviously, alcoholics, they have terrible looking brains.
Don't do that.
But you got to ask yourself, why?
And remember, we talked about the one-page miracle.
What do you want?
Relationships, work, money, physical, emotional, spiritual health.
So where does alcohol come in to that?
Oh, well, it helps me relaxed.
Well, the 15-second breath will help you relax, but there are no side effects to it.
That will increase your heart rate variability.
Alcohol will decrease heart rate variability and brain function.
And if it decreases brain function, it decreases decision making.
As a psychiatrist, 30%, 40% of the people I see, they initially come to my office because it's somehow alcohol-related.
Fight with their spouse, problems with their kids, whatever.
It's so impressed.
Do you notice the difference with heart rate variability and then you stopped?
Yeah, because I was offensive with alcohol.
And it's crazy.
And I now understand how difficult it is to stop in our society.
I was telling my team, I quit.
And I went for dinner with a guy called Skrillex.
So everyone knows Skrillex is a DJ, Sonny.
And this was a week after I'd quit.
Sat in the restaurant.
The waiter comes over.
Bless him.
And he goes, here's the wine list.
I go, I don't drink alcohol.
He goes and gets a bottle of wine.
And he puts it next to me and goes, this is not alcohol.
This is art.
I'm going to leave it next to you just in case you get tempted.
And Sonny's, Sonny to his credit is telling this waiter, no, he doesn't drink.
This waiter's having none of it.
And in that moment, I understood how difficult it is to quit in the society that we've built, where every social interaction apparently needs to be fueled by alcohol.
And if you say no, you're either weird or someone will try and change your mind or persuade you otherwise.

It's just the culture we have.
It's the evil ruler society.
I tell you, that's an evil ruler strategy.
The food pushers, the drug pushers, the alcohol pushers.
For me, I just, I look at people like that and it's like,
so why do you want me to drink when I don't want to?
What's going on with you?
And I usually shut them down.
But why an interesting question.
When you go to a restaurant, the first thing they do is put bread on the table
and ask you if you want alcohol because both of them drop your frontal lobes.
Both of them make it more likely you're going to order more
and spend more money at the restaurant.
So the bread is an investment on their part because bread gives you a sugar spike,
a blood sugar spike, which then pushes serotonin in your brain and makes you happy.
But serotonin drops frontal lobe function.
One thing they never tell you when they give you an SSRI for depression
is, oh, you're going to become a little bit more impulsive
because it's going to drop your frontal lobes.
And then alcohol, which also drops your frontal lobes.
So you'll drop more cash in the restaurant.
Question then on this point of alcohol.
If I took two people off the street,
let's say they do everything in their lives the same other than what I'm about to say.
I gave one of them a casual drink for the next decade,
just maybe two drinks a week, three drinks a week for the next decade.
And the other person was completely sober for the next decade.
When you looked at their brain at 10 years time,
if they were doing everything the same, would you see a difference?
Yes.
The person who is drinking two or three times a week will have less blood flow in their brain.
And will that have changed the shape of their brain?
Yes, it'll be a little bit more shriveled.
And then that means their behavior is going to change as well.
They'll have a little bit less impulse control.
And when you look at the brain of an alcohol...
A little bit less impulse control when you're doing hard things, like marriage.
Not a good thing, erasing children or managing a business.
It's like, you don't want a little bit worse decision.
Sex and libido.
A lot of people are struggling with their sex lives,
getting an erection, getting aroused, men and women, the brain and sex.

I imagine you have people come to you and go,
listen, me and my wife, me and my partner, me and my husband,
we've stopped having sex.
I've lost my libido.
When you hear that and you offer people advice on libido and sex, what is...
You get your brain right, your sex life gets better.
In large part, it's about blood flow.
And if you're having erectile dysfunction or low libido, you got to go, well, why?
What are the risk factors with that?
And many of them relate to what's going on in your brain.
So often people go, I did everything you said,
and my wife's so much happier with our sex life.
You have to check your hormones.
I think that's very important.
You have to deal with whatever sexual trauma might be there.
The biggest sex organ in the body is your brain.
If there's no forethought, there's no foreplay.
And so it's about the decisions that you make.
What else do I need to know about sex?
If I'm trying to get my partner in the mood and I'm trying to make them aroused.
It depends on their brain.
Okay.
Right.
So if your partner has a very busy frontal lobe, that part called the anterior cingulate gyrus,
you can't go, come on, let's have sex.
Because you've met people with the automatic no that no matter what you say,
they're going to say the opposite of it or they're going to fuss with it.
I mean, it's like, it's nice day today.
Oh, no, it was nicer yesterday.
I mean, even simple things.
So you want to have sex?
No.
I was at this lecture once and somebody came up to me at a break and said,
you've helped me so much.
I thought my wife just didn't love me.
And what I realized is that part of her brain was just working too hard.
So now I ask everything in the opposite.
It's like, oh, like if I wanted to go to the store, she'd never want to go with me.
And I'd go.
So now what I do is I go, I'm going to go to the store.
You probably don't want to come.
What do you mean?

I don't want to come.
Of course I want to come.
He said, but doesn't sound right to say, well, you probably don't want to have sex.
Oh, I go, okay, I know her brain do this.
And I gave him natural things to boost serotonin.
So I said, take her out for a pasta dinner.
So I'm not a fan of pasta generally, except for these people.
Take her out for a pasta dinner because pasta increases serotonin.
Then take her for a walk around the lake because exercise increases serotonin.
Then give her a piece of dark chocolate, not too many.
Because if you get her too many, she'll have no need for you.
But dark chocolate has PEA in it, phenylethylamines,
that alerts your brain that something fun is about to happen.
And then put on a little baby powder because baby powder,
it's been shown scientifically as a natural aphrodisiac for women.
Because what do women unconsciously associate to baby powder?
Babies.
And unconsciously they want one.
And then rub her back and don't ask for anything directly.
And from about day four to about day 18 of her menstrual cycle,
you're likely to get lucky.
Why from day four to day 18?
Because she's the last week of a woman's menstrual cycle,
especially people who have this brain type tend to be more irritable.
Is that before that period?
That's before the period.
Okay, so the week before that period is when...
So two weeks before their period is generally the best time.
Do men and women have different brains significantly?
Wildly so.
This whole thing about you can't put your gender on your medical forms
is just insanely stupid.
Because gender matters.
Like estrogen and testosterone,
they matter when it comes to brain function.
I published a study on 46,000 scans looking at the differences
between male and female brains and they're wild.
Women have much better frontal lobes function,
but much better blood flow to the front part of their brain.
Which makes them...
Which makes them good leaders if you think of impulse control
and collaboration and communication.

And the one statistic that just hammers this home is who goes to jail?
Men, 14 times more than women.
But women get depressed twice as much as men
because their limbic or emotional brain is much busier than the male brain.
And that's why in every human society,
women are primary caretakers for children.
Women have a bigger nesting instinct.
So I told you we moved recently.
And moving is much harder on women in general than it is in men
because they feel like they lose their nest and they have to redo their nest.
And I was an army psychiatrist for seven years
and I used to always tell the guys, I'm like,
when you move, you stay home and help her put the house together
because she's going to be way happier for you.
On that impulse control, but I remember reading the statistics
that men suffer with gambling addictions and betting addictions
significantly more than women.
Drug addictions, alcohol, ADD, five times more than women.
But women get help because they're not afraid tasks for help.
Where for men, it's often a macho thing.
It's like there's nothing to matter with me.
Which is why women attempt suicide three to four times more than males.
But males kill themselves three to four times more than women do
because men use more violent means.
And men aren't communicating.
I'm in trouble.
Saunas, sauna's an exercise on the brain.
Good for the brain.
So I'm a huge fan of saunas because the studies mostly from Northern Europe,
people take the most saunas, have the lowest incidence of Alzheimer's disease.
And I told you about my mercury detoxing is really important.
And you can detox in a lot of different ways,
but sauna is one of the most effective ways.
Exercise is you want to stay young.
Walk like you're late.
If you're 80 and you can walk three miles an hour,
you have a 90% chance of living until you're 90.
If you can only walk a mile an hour, you have a 90% chance
you're not going to live until you're 90.
So exercise boosts blood flow.
It increases brain-derived neurotrophic factor.
It increases serotonin, increases dopamine.

Another interesting thing is should you do cold plunges?
Because cold plunges have been found to fairly dramatically increase dopamine.
So you should do cold plunges?
Not if you have heart problems.
So if you have heart problems, I wouldn't do that.
But if you have inflammation, if you have pain,
if you tend to be depressed, there's evidence cold plunges can be helpful.
What about weight in the brain?
When you look at someone who is clinically obese and you look at their brain,
what do you see?
And if I'm trying to lose weight, what do I need to know about the brain?
You know, I've thought a lot about this because I have obesity in my family.
As your weight goes up, the size and function of your brain goes down.
And that's horrifying.
People who are, and our society is against us.
I mean, you just, I wrote a book called The Brain Warrior's Way.
And I argue you're in a war for the health of your brain.
Everywhere you go, someone's trying to shove bad food down your throat that will kill you.
I can see the emotion in your face when you say this.
Yeah. It's just horrifying, you know, to think of Carl's Jr. that'll take these,
you know, Charlotte McKinney or Catherine Webb, these beautiful women,
and have them eat cheeseburgers.
And it's unconsciously people are like, if you eat those burgers, these women will want you.
Well, these women have spit buckets on those sats where every time they take a bite,
they spit it out because they'd never have those bodies if they ate that food.
We are being manipulated.
And it is causing what I think is one of the greatest epidemics ever of obesity.
And as you're overweight, lower blood flow, aging, inflammation,
stores toxins, makes you feel awful about yourself, takes healthy testosterone.
We talked about, you know, why the low takes healthy testosterone
and turns it into unhealthy cancer promoting forms of estrogen.
It's just a disaster what's happening.
I think you have to start counting your calories.
And, you know, I run up against all sorts of scientists go calories don't count.
It's complete crap.
Now, the quality of your calories is just as important, but don't eat more than you need.
And we live in a society where we're eating way too much.
And people don't know if you think of the cheesecake factory and these monster portions.
It's like, that's insane.
And it's a big thing that changed.
But the obesity epidemic really started as the US government, among others, demonized fat.
And everything became low fat in the 80s, low fat, low cholesterol.

And they put sugar in things to replace it.
And in fact, it just came out recently, it was in the 60s,
that some of the sugar companies paid scientists to say it's fat, not sugar.
And it damaged millions of people.
Last thing I wanted to ask you about is, well, there's really two
outstanding questions that I have for you, Doctor.
The first one is about screen time.
People want to know, does screen time, this generation that have grown up 11 hours a day
on a screen or social media up to 11 hours a day, according to some studies,
does that have an impact on our brain?
It does. It drinks it.
It's sad.
I mean, what it does is it wears out your pleasure summers.
So you have these two areas in your brain called the nucleus accumbens,
and they respond to dopamine, and they bring you happiness, and they bring you pleasure,
and they bring you motivation, and they bring you drive.
And when you're hitting them, like every buzz on your phone, every notification,
every time you scroll and you like something, you just got a little hit of dopamine.
Well, the more you do it pretty soon, you thrill them to death.
You begin to wear out those pleasure centers.
And let's just take fame, for example.
I've been blessed to see Justin Bieber and Miley Cyrus and a whole bunch of really fascinating,
cool people who've been really depressed.
How can you be depressed, you're Justin Bieber?
Or how can you believe you're not enough, right?
Because their pleasure centers get worn out by being noticed over and over and over again.
Well, when you allow that in your brain, the screen time, three and a half hours,
if you're on for three and a half hours a day, you have an increased risk of anxiety,
depression, addiction, obesity, ADHD.
And our society is on way more than that.
And you go, so why are we having this epidemic of teenage suicide and mental health problems,
especially in teenage girls, social media?
It's one of the big issues of the day.
And not only are you wearing out your pleasure centers, you hate yourself,
because you think everybody's better than you are.
It's the comparison dragon that is damaging you.
And my last question is about happiness, which we're talking about then.
I spoke to, I think it was Tally Sharup that told me happiness takes on this kind of
interesting arc throughout our lives, where at the start of our lives, we're a little bit happier,
then in the middle of our lives, we're a little bit sadder.
And then as we age, we go back into being happy.
Now, I was contrasting that information to what you said about how the brain withers with age.

If the brain is withering with age, then how come a lot of neuroscientists think
that happiness resembles this kind of U-shape in our lives,
where in the middle of our lives, we're less happy?
At the start and the end, we're more happy?
That's a great question.
We're less striving as we age, right?
So after 65, 70, we've sort of done much of the hard things that we need to do.
And so depression also goes up with age too.
And obviously dementia goes up with age.
So I think it's because I don't have to accomplish things, which makes the middle part so hard.
So we're more satisfied with the nature of our lives because we're not trying to...
Well, if we are, right?
If we're not, then that becomes a problem and increases the risk of depression.
It's complicated, though, isn't it?
Because you get older, you probably have less connections as well.
So that's a confounding factor.
Yeah, so I wouldn't...
I mean, I have seen that research and I wrote a book on happiness
because, you know, when I write a book, it'll take me six to nine months to write it.
And I'm like, so what do I really want to think about for this next six to nine months?
And I loved it because like negative thinking is about habit, is happiness is also a habit.
And when I go to bed and I go, what went well today, I'm feeding happiness.
Or throughout the day, if I look for the micro moments of happiness, you know,
what's the smallest thing that's going to happen today that's going to make me happy?
Then I'm just happier.
I hear all of this and I read all of this in your books.
And one of the things I've really taken away personally
is because I have so much information, what I need to do is select a couple of these habits
and basically put them into my calendar.
Like you talked about the breath work and you talked about the gratitude
exercise at night and those kinds of things.
What I need to do is get a couple of them and just insert them into my calendar.
Because, you know, if they're not scheduled, they probably won't happen in a life as busy as mine.
So as well as making small sort of changes to the, you know,
maybe dietary things or water or whatever, it might be drinking a little bit less caffeine.
I've already quit alcohol, make sure I focus on my sleep.
Some of these I want to make routines in my life.
So that's what I'm going to do.
That's what I'm going to take away from this.
We have a closing tradition on this podcast where the last guest leaves a question
for the next guest not knowing who they're going to be leaving it for.
And the question that's been left for you is quite perfect, I think.

What have you changed your mind about in the last decade?
Well, the first thing that comes to my mind is this idea
that I got from Dennis Prigger, which is happiness is a moral obligation.
I never thought of it that way.
I grew up Roman Catholic.
That idea was nowhere in my family.
It was nowhere in the Catholic school I went to.
And I'm grateful for my education.
And I'm grateful for my faith.
But it was about should and shaming rather than elevation.
And the fact that happiness is a moral obligation.
There's this video that Dennis Prigger produced that I just love called Why Be Happy?
And I never thought that how I feel influences everybody around me.
That if I'm unhappy, that's not just about me.
That's about everybody I come in contact with.
So working on myself is the most loving thing I can do for other people.
Daniel G. Amen.
Thank you so much.
Thank you for an amazing conversation.
And also thank you for taking the time to look at my brain.
And you're totally right.
Now that I have the awareness that that brain even exists, having seen it,
it's almost like I feel like it's like Pablo my dog.
I now feel a responsibility to take care of it.
And I think that that coupled with everything that you've imparted on me about
the fact that I can do something about it for me is life changing.
And I could have sat here all day and read tens of thousands of comments that I saw online
about the work that you're doing to help people live happier, healthier lives.
And the consequence that has for generations I think is maybe the most special thing of all.
Because if you can tilt someone's brain in a better direction,
you're not just tilting their brain in a better direction.
You're tilting generations to come of brains in a better direction.
And that alone will tilt society in a better direction.
And that's exactly the work that you're doing.
So I know we talked about your father last time around.
You know, oftentimes we don't get the praise from our parents that I guess we always longed for.
But I really hope you understand how proud everyone is of you.
All the patients that you've invested time and love and energy in,
all the people that listened to this show that were tilted in a better direction because of you.
And me as well.
My life has been tilted in a better direction because of you.
So thank you.

Thank you so much.
What a joy.