

Recording: Bulletproof Radio, a state of high performance.

Dave Asprey: This has to be one of the coolest episodes of Bulletproof Radio because we're interviewing one of America's top psychiatrist who's blazed a trail in the field of psychiatry using imaging to see what's actually going on in your brain. We're going to talk about traumatic brain injuries. What to do if you get hit, things to support your brain? What you can do if you or your family has Alzheimer's? It's kind of just packed throughout this episode with stuff you can do. Listen through all the way to the end, and you're going to just get a continuous stream of good knowledge, good information.

You're listening to Bulletproof Radio with Dave Asprey. Today's cool fact of the day is that teens at work are better when they include your friends. Researchers recently at Ohio State University looked at results of 26 different studies. That means it's a meta-analysis and found teams composed of friends perform better on some tasks than groups of acquaintances or strangers. They found that friends work together best if the goal is to produce the most output because friends motivate each other.

They said working with friends isn't something that just makes you feel good, it actually produces better results. That working with friends puts you on a better mood, and you can work through the adversity and strain that comes from having to produce a lot in a short time. If you want to get a lot done, hire your friends. If you want to keep your friends, make sure that you're nice to them if you work with them because there's always risks of working with friends especially if they're lazy; but hey, I didn't say that, and I wasn't talking about any of my friends of course.

If you ever had a chance to check out the new Bulletproof FATwater, we've got water with zero sugar, micro droplets of Brain Octane in the water. You get your energy from fat versus sugar. A few extra B vitamins, and it's about 20 calories per bottle, but it tastes amazing. It's got those tiny droplets of Brain Octane oil and you really feel it. It's one of my favorite new things that we have. We'll ship it to you with free shipping from the eCommerce store, and it's one of the things you can use when you want something good to drink. In the afternoon, if you don't necessarily want coffee, it's my go to beverage.

All right, today's guest is none other than Dr. Daniel Amen. He's a 10 times New York Times bestseller. I think maybe 11 times. Dr. Amen, are you 11 times or 10 times New York Times bestseller, or did you lose count?

Dr. Amen: 10.

Dave Asprey: 10, okay. Soon to be 11, I'm sure. Dr. Amen has been on the show before, but he's one of my favorite brain guys on the planet because unbeknownst to him almost 20 years ago, his work radically changed my life. I can tell you flat out, I would not be recording Bulletproof Radio today if I hadn't had a SPECT scan

because of his very first book 20 years ago that showed me what was going on in my brain, in my biology was a hardware problem. It wasn't a moral failing. I literally looked at my brain and found out, "Oh." When, I'm trying to complete a task at Wharton and nothing happens in my brain, it wasn't because I wasn't trying. It's because there was no blood flow in the front of my brain.

He's, I think changed the world of brain science by just relentlessly talking about this crazy idea that people who work on the brain and work on psychiatry ought to maybe know what's going on inside the brain; or actually looked at it instead of just treating behaviors. On top of that, now he's created the Amen Clinics, which is a chain of clinics, which have one of the highest probably success rates for treating complex psychiatric issues. He's the lead researcher on the world's largest brain imaging and rehab study on professional football players. He's on Bulletproof Radio today to talk about Memory Rescue, which is his new book. It's Memory Rescue: Supercharge Your Brain, Reverse Memory Loss, Remember What Matters Most.

Dr. Amen, it's awesome to have you back on the show. I appreciate your book. I got an early advanced copy. It didn't even have the cool pretty color on it yet, so I could check it out. I'm a huge fan of your work, and you've earned the respect of millions of people even though when you first started on your path 20 years ago. No one had heard of the kind of imaging you're doing. I'm super stoked to have you and to talk about Memory Rescue because everyone listening has the potential to lose their memory the way I did in my early 20s. More importantly, we all have family members, grandparents, parents, who are very likely to go through this if you look at the statistics. I think your book is timely and helpful. I wanted to share some of that knowledge with people listening today. Welcome to the show.

Dr. Amen:

Thank you my friend. Always good to talk to you, and a huge fan of your new book Head Strong and gave it a recommendation; and so many people struggle with brain issues and they don't know. When they do know, they get afraid and they hide it. Cellphones are masterful at hiding problems because you can type in home, and it will actually take you home. You won't get lost. We're actually diagnosing memory problems later than ever when we should be intervening super early like in childhood, or adolescence, or early adulthood. Memory Rescue, people think, "Oh well, I don't have Alzheimer's. That's not for me." It is to keep your brain healthy for as long as possible.

Dave Asprey:

I came to the realization that I was old when I was young. By the time I was in my mid-20s I had arthritis in my knees for 10 years. I was at high risk for stroke and heart attack according to my blood tests. When I got my SPECT scans back from you, it was like, "Wow! I really do. I'm feeling like I'm forgetting things. I'm feeling like I'm losing my brain." From what I can measure in terms of my performance, I know my memory is gone. It really happened. I was suddenly like I don't want to be like this again. That's been a big motivator for me in my own writing, just my own life. I'm not going back to that because it really sucks.

What you just explained there about hiding it, absolutely. You take copious notes, write everything down. You build all those crutches in your life because admitting that you're failing or admitting that you're weak is really hard to do especially in my case. I'm at one of the world's top business schools and I'm like, "Maybe I'm just dumber than all my friends," not recognizing it's a memory problem, and a blood flow problem, and there's other things going on.

That little voice in your head that's like, "I'm not going to look. I'm not going to look." I think it's happening in a lot of people. I'm just profoundly grateful I was looking at the results of my last scan at Amen Clinics, and you have like a functional assessment. My working memory was 8.5 out of 10. It wasn't like that 20 years ago. I am better now. I'm about to turn 45 than I was when I was 25. It's possible but only if you're willing to face, "Oh wait, maybe I'm not continuously improving with it. Maybe I've been holding even. I'm just going down a little bit." How do you recommend that people know if they're going downhill just a little bit? It takes a lot of self-awareness. What's the trick for developing that?

Dr. Amen: The brain is one of the only organs we don't screen. People screen their hearts. They screen their kidneys. They screen every organ except the brain. I'm hopeful through Memory Rescue and Change Your Brain, Change Your Life, that people will begin when they get to be 40. Just think about, "How can I screen my brain?" People can come to one of our clinics and to look at their brain using the SPECT imaging we use. We also have online tools that can help them know, "How's my memory compared to people of my age?" Screening is just absolutely essential.

There's actually a step before that. I remember when I looked at my own scan in 1991, I was horrified. I had [inaudible 00:08:35] the week before and she had a gorgeous brain, but when I looked at mine, it was not nearly as healthy and she was 60 years old. I was 37. Since then, I developed this concept I call brain envy. As a psychiatrist, I realized Freud was wrong. Penis envy is not the cause of anybody's problems. They don't care enough about their brain. It's really three pounds of fat between your ears that if you care about it, then you have to see it. Then you have to see, "How can I make this better?"

The really simple idea behind Memory Rescue is if you want to keep your brain healthy, or in your case, or my case get it back. If you think it's headed for trouble, you have to prevent or treat the 11 major risk factors that steal your mind. We know what they are. Memory Rescue, it's all about what we call a BRIGHT MINDS approach to optimizing and rescuing your brain. If you know these risk factors, what can you do to prevent them, or treat them if you need to?

Dave Asprey: All right. You talked about the BRIGHT MINDS approach, which is actually an acronym for those 11 factors. Can you walk listeners through, maybe the three or four most important things that are causing these problems?

Dr. Amen: What I learned a long time ago because everybody asked me that question. It's like, "What's the most important thing?" The most important thing obviously is you care about your brain.

Dave Asprey: There you go.

Dr. Amen: What we learned, and this is why ginkgo doesn't work or vitamin A by itself doesn't work. The brain doesn't get sick in one way, and therefore it will never get better in one. That's why, attacking all of them is important. Since we have time, I can run through with them, and I won't torture people with all the detail. The B in BRIGHT MINDS stands for blood flow. Low blood flow is the number one brain imaging predictor of Alzheimer's disease. When we looked at your original scan and then had serious low blood flow, if we wouldn't have worked on reversing that trend, then it would have caused you and the people you love serious problems going forward. What steals blood flow? Hypertension, even pre-hypertension is associated with lower blood flow to the brain.

Dave Asprey: Which is weird. You think higher blood pressure will get you more blood flow to the brain.

Dr. Amen: Right, except that you put water under pressure. It actually lowers the output. We want your blood vessels to be pliable, to be flexible, to be soft to allow more blood to go through them because if you think of blood it's life. It brings nutrients and it takes away toxin. Any form of vascular or heart disease causes blood flow problems. Did you know? I mean the thing that always blows me away, erectile dysfunction is a sign of the blood flow problem. 40% of 40-year olds have erectile dysfunction. 70% of 70-year-old have erectile dysfunction.

I think you might know my friend Mark Houston who is a cardiologist in Tennessee. He said, "100% of the people he has evaluated who have erectile dysfunction have heart dysfunction," which means they also have brain dysfunction because your brain even though it's only 2% of your body's weight, uses 20% of the blood flow in your body. Any vascular problems, so if you're not exercising, likely you have blood flow problems. Now, this is where ginkgo shines because ginkgo increases blood flow. The prettiest brains I ever see are brains of people who take ginkgo.

Ginkgo, vinpocetine, beets, cayenne pepper, exercise. I mean they're really simple things people can do to increase blood flow, but the first thing is to avoid anything that might be hurting them.

Dave Asprey: Now, my dad recently over the last year or so, his cardiologist put him on a blood pressure lowering medication, which also radically reduced blood flow to his brain. In fact, I had to send him my OxyHealth Hyperbaric Chamber. What I have here at Bulletproof labs, I literally put it in my truck and drove it to him. It restored his brain, and it turns out they lowered his blood pressure so much that his brain wasn't getting enough blood, which is a real common problem in

older people on blood pressure meds. I guess there's a comfortable middle where if you don't have enough blood pressure, you're not going to like your life. If you have too much, you're not going to like your life.

Dr. Amen: That's absolutely right. One of the risk factors for Alzheimer's disease is low blood pressure in the elderly. You want to get enough so that blood will actually get to your brain, but too much will shut it down as well.

Dave Asprey: Is there an optimal range or does that depend on how tall you are and things like that, so it's hard to say?

Dr. Amen: No, the optimal range is for the lower number, 65 to 80, below that people can get dizzy; or the higher number, 100 to about 120. That would be the optimal range. They've even found pre-hypertension. The lower number, the diastolic number 85 to 90 has been associated with brain atrophy and above 130. There is an optimal range. You don't want to go too low or too high, and that's true for most of the things we'll talk about. The R in BRIGHT MINDS is retirement and aging. When you stop learning, your brain starts dumbing. If you're engaged in a job that requires new learning, I'm sure that's true at Bulletproof.

Dave Asprey: Thank God, yeah.

Dr. Amen: What's new and exciting that they're probably not a lot of people in your company like my company who are bored, because we're always trying to sort of push the edge. That's good for their brain. Also, what goes with retirement is people who are lonely, have a higher risk for Alzheimer's disease. People who are socially isolated have a higher risk for Alzheimer's disease. People have low levels of acetylcholine and that tends to drop as we age, or high levels of ferritin. Ferritin, measure of iron stored. Now, ferritin like blood pressure, there's an optimal range; too high puts you at risk for vascular problems, too low you can't think and you're anxious. It's always a matter of balance. I see a lot of patients who have high ferritin levels, and I saw-

Dave Asprey: How would a listener know if they have high ferritin without getting a blood test? Does it matter? Okay, got it.

Dr. Amen: They got to get blood test. This is why bleeding people is helpful.

Dave Asprey: Leeches, I knew you're going to bring them up.

Dr. Amen: Tana and I were in Istanbul. Tana is my wife. We were in Istanbul, and outside the spice market they were selling leeches. They were in this huge jugs. I looked at my wife and I'm like, "Why are they selling leeches?" She's like, "It's a health fad. It helps people decrease their ferritin levels, and they think it keeps them young." If you have low ferritin levels, don't do that; but the way we bleed people here in the United States is we send them to the Red Cross. If you go

donate blood to the Red Cross, which I've done many times, they're like vampires. They're always after you.

Dave Asprey: I just had a procedure. I mean to talk about soon, very few people have it done but I had to get 21 vials of blood taken. I figure if I could use some random procedure like that in once a quarter, I should be able to donate enough blood that I can-

Dr. Amen: It's got your level optimized and the optimal level is between 40 and 90. Lower than that, iron's important to make dopamine, so you'll be on focus; but higher, and I've always been on the high side, it runs in my family. It's associated with trouble, bad things, delayed healing, and so on. If I had to pick one thing, it would make sure you're learning new things every day. It's keeping your mind engaged and not on things ... Both you and I work in high level professions, but it's not doing the same thing over, and over, and over; because when you learn to do something whether it's internet marketing or speaking, your brain figures out how to do it. Over time, it uses less and less energy to do it. Picking up a new instrument, or a new language, or it's doing something in a new and different way that it's so important.

Dave Asprey: This means that playing video games only works if you're constantly switching to a new one that's challenging versus playing the same one over, and over, and over?

Dr. Amen: Correct. Tetris can only work so long. One thing about Tetris is that they've done studies and found if you're an addict, a food addict, cocaine addict, an alcoholic, if you play Tetris for 20 minutes, it will decrease your cravings.

Dave Asprey: I had a problem with Tetris and maybe you have some insight on this. It's definitely not in your book. I think I was a sophomore at university and I got some Nintendo. This is going back like a long time. I started playing Tetris, I couldn't stop. I was like missed classes as I just was obsessively playing Tetris. It gets to a point that I would close my eyes to go to sleep at night, and I'd see shapes following me behind my eyes. I'm like, "All right. That's it." I have to sell my Nintendo. I just got rid of it. What was going on with that? Is that like a form of addiction because I still remember to this day like fear of Tetris. I don't know why. It's fun, but also-

Dr. Amen: It puts you to hypnotic trance. One of the things ... I remember when I used to play it, I mean now I play it recreationally if I'm on a plane and we're going to land and I have 10 minutes I can play. What I found, it would actually put my mind into a hypnotic trance and time would be kind of distorted.

Dave Asprey: Yes.

Dr. Amen: I would start playing, then all of a sudden it's three hours later. I'm like, "Oh, that was a waste of time." I'm like, "Don't do that again."

Dave Asprey: For people listening, here's something I want you to test. Get some language learning like Rosetta Stone or something and play Tetris, and see if you learn language as fast. Maybe that hypnotic state is a useful state; and because I'm crazy, I am going to wire my brain out at 40 years has into it, a 24-channel EEG and play Tetris and see what the heck it does. I don't know what the hypnotic state is, maybe we could use that for hacking our brains. What do you think?

Dr. Amen: I think it's certainly interesting, like decreased craving. It probably has its own little dopamine squirt going with it.

Dave Asprey: It must.

Dr. Amen: The better word I like is drip. You want to do activities that drip dopamine throughout the day that help you feel sort of pleasure, and happy, and focused, and motivated. You don't want to pour dopamine. If you do cocaine that pours dopamine [crosstalk 00:21:30]

Dave Asprey: Cocaine and porn. Those are the two big dopamine things, right? Extreme sports maybe like almost dying-

Dr. Amen: Extreme sports clearly would do it as well, and sometimes video games as well, especially if you're like murdering 250 people in three minutes. That it is pouring dopamine. The problem with pouring dopamine ... or if you got a big sugar burst. Sugar burst pours dopamine as well. They've actually found people who are overweight have dulled activity in the nucleus accumbens, the pleasure centers where dopamine acts. I always think that's interesting. That's why you want to avoid cheesecake or donuts because they actually are physically wearing out your pleasure centers. You have to be careful with it; better to drip dopamine than to pour it.

Dave Asprey: Very interesting advice for people listening. If you're finding yourself addicted to one of those behaviors, dopamine drives a lot of addiction. Gambling for sure is, every time you win like big squirt of dopamine. If you have no dopamine because you don't have an interesting life, or because you have the inability to make it, you're also not going to like your life.

Dr. Amen: Right. I mean, and that's what we see depression, and amotivation, and apathy with Parkinson's disease. I actually have a funny story. I tell the story in the book. One of my professors when I was in college, the most proper man you can imagine, I was dating his daughter and just ... I mean he was religious, and sweet, and kind, and he ended up with a form of Parkinson's disease. All of a sudden, his favorite shows on television are Dr. Phil and Jerry Springer. It just didn't compute to me, until I realized he wasn't producing dopamine. He needed Dr. Phil screaming at somebody, or Jerry Springer having some crazy family drama in order for him to feel anything at all. Isn't that interesting? You want to protect your dopamine centers and one of the things that kills them are toxins, which we're going to get to is T in BRIGHT MINDS.

Dave Asprey: Oh, yeah. I was hoping you'd go there. That was a big issue for me. Let's talk about toxins in the brain because so many people online, the science folks say, "Oh, toxins don't matter. What doesn't kill me, makes me stronger." I'm like, "It doesn't really work for hand grenades or mercury as far as I can tell." What's your take on toxins for the brain? What are they doing? Where are they coming from? I think this is so important for people listening.

Dr. Amen: When we saw your brain, it's like now there's a toxin where you're drinking, or you're smoking a lot of pot, or you're doing cocaine. For you, the answer was no. We're like, "Okay, well then what else can cause it?" Carbon monoxide, anoxia or having the lack of oxygen, mold, mercury.

Dave Asprey: In my case when I had my first scan done, you didn't look at it personally back then; we hadn't met. When I showed it to you later, you're like, "Dave, this is the brain of someone who's on street drugs living under a bridge." I was living in a house with toxic mold in the bedroom. You actually said, "This is chemically-induced brain damage," that I had been dealing with. It's since been healed, but that's the effect of toxins on the brain. It wasn't one of those things that doesn't kill you, makes you stronger. It just jacked me up.

Dr. Amen: It's so devastating. For me, I ask myself, "So I'm a psychiatrist. Why do I care about mold?" Because it damages people's brains and if it damages their brain, they look like they have ADD. They looked depressed. They're having trouble of getting along, being successful. It's just so important. If you see evidence of toxicity on scan, to work it up as fully as possible. How you deal with toxins is you eliminate exposure, and then you support the four organs of detoxification, your kidneys, your gut, your liver, and your skin.

Dave Asprey: Now, a lot of people are dealing with mercury now. It seems like it's becoming a bigger and bigger problem. We've been burning so much coal for so long. We've polluted our oceans and even just a lot of our crops now if not inorganic. They're taking sewage sludge that is high in mercury, and there's a limit to the amount of mercury allowed, say 10 parts per million. They'll cut normal fertilizer with basically sewage sludge from big cities until it's nine parts per million, like right below the acceptable levels. Then they'll spray that over crops. We're getting higher mercury levels. What can people do if they have mercury in their body already? Are there things you recommend?

Dr. Amen: At Amen Clinics, we're not real big fans of chelating people because we've actually seen people can become worse.

Dave Asprey: Yes.

Dr. Amen: It's limit exposure, and then really activate your own detoxification pathways through your kidneys, drink more water. I saw you have a new drink, which is really exciting. We make something called Brain Boost on the Go just to encourage people to drink more.



Dave Asprey: Is that like a powder? I haven't tried it yet.

Dr. Amen: It's a powder that we're excited about. It's got B6, B12, folate, theanine. It helps people feel focused but not agitated, and they drink more water.

Dave Asprey: You sweeten that with NutraSweet, a little brain bit of sucrose and some other? That was a joke. NutraSweet is actually bad for your brain if you're listening and you don't know that. There's this look of horror on Dr. Amen's face when I said that. It's clearly sweetened with something that's good for your brain, right?

Dr. Amen: Yes. I actually really like combination of erythritol and stevia because stevia is actually been found to have health benefits, decreases Lyme when you put it in Petri dish with Lyme. Erythritol, neither one of them raise your blood sugar and that's really important. I don't want you to really have a lot of either one of those, because it sort of primes your taste buds to want more. It just puts you at risk to want more sweet things. Water, fiber, absolutely essential to help detoxify your body. I'm a huge fan of N-acetylcysteine. If you actually look at the studies, N-acetylcysteine is fascinating. It's what they used to help people who have Tylenol over dosage.

Dave Asprey: Yes.

Dr. Amen: It helped the liver, but it's also got multiple studies showing it improves resisting depression. It helps with cocaine addictions, with marijuana addictions, with alcohol, and compulsive gambling. I just think it's really fascinating. Then the skin and sweating really helps. In Memory Rescue, I talked about a study from Finland where people who took the most saunas had two thirds lower risk of Alzheimer's disease. I think it's because they're helping to detoxify someone's body. The more saunas you can do, odds are that's better for you at least if we believe this research.

Dave Asprey: Do hot tubs probably do the same thing?

Dr. Amen: No.

Dave Asprey: Why not?

Dr. Amen: The sweating that really helps activate it, and the infrared sauna penetrate deeper than just hot water. My sense is it's not just being in hot water. It's activating your sweat gland activity as much as you can where you don't feel dizzy, or tired, or nauseous.

Dave Asprey: Got it, yeah. I definitely use my infrared sauna on occasion, but for some reason I'm one of those guys who can sit there in it on full blast for an hour and it's 150 degrees. In half hour, and I'll start sweating. My tolerance for it is much higher than most other people. It takes a long time for me to get benefits from infrared sauna, at least that kind of benefit.

Dr. Amen: It's true for some people, but after like seven or eight sessions, it actually ... Your sweat gland activity will likely increase.

Dave Asprey: Oh, interesting.

Dr. Amen: It's almost you have to prime it to work over time.

Dave Asprey: All right. Maybe I'll just do more than back to back.

Dr. Amen: The other thing that's really important, is in the book I talk about certain apps you can download to know about your personal products. As you talk about food and I think this is the reason you need to eat organic, I mean for many reasons but decrease the toxins on your food, is whatever goes on your body, goes in your body.

Dave Asprey: Yes.

Dr. Amen: I like this app called Think Dirty. It allows you to scan your personal products, and it will tell you on a scale of one to 10 how quickly they're killing you. For example, it was ... I'm sort of irritated with myself because there was sort of like no thought at all. I always read the labels for whatever I put in my mouth. I never read the labels for whatever I put on my body. It's like it's nuts. Softsoap for example, on a scale of one to 10 was a 10 and I was horrified. Where Suave, I mean, they're the same cost. They're both inexpensive, is a five. Now if you like yourself, which one are you going to choose? Now, I love myself so I get something out from Africa that's a two.

In the store whenever I buy something, I'm scanning the label into Think Dirty or there's another app by the environmental working group called Healthy Living. I'm just going, "This is good for me or bad for me?" Does it have things like phthalates, and parabens, and fragrant that are known endocrine disruptors. The N in BRIGHT MINDS is neurohormone deficiencies, and low levels of testosterone, or thyroid, or estrogen, or progesterone for women, are known to disrupt your cognitive function. Why am I going to put something on my body that potentially would steal the hormones that drive my happiness?

Dave Asprey: We have a rule in my house. We don't put on our skin if we wouldn't put it in our mouth. I've been working for quite a while with Alitura. A friend of mine, Andy started it. He was a guest on Bulletproof Radio when he first talked about what he was doing for his skin. He's a model who recovered from a really bad car accident, just amazingly quickly. Every ingredient on there, it's like it's a food, or it's an essential oil, and that's the stuff that I started using in my face because ... It wouldn't taste good, but literally I could pump it in my mouth and swallow it, and it wouldn't harm me.

That's the standard that I have for anything that goes on my body, which is why also when I travel, I bring my own soap with me; because the crap they put in

the hotel rooms is full of stuff. They're not even going to be scannable by these apps because it's the cheapest possible soap with the nicest possible wrapper, like that's how hotels do it. Just don't use hotel products, bring your own. It's a little piece of advice I might offer. What do you think, you agree?

Dr. Amen: I would. It's an act of love. People go, "Oh, this is hard." I'm like, "Come on. None of this is hard." Being sick-

Dave Asprey: Putting a bar of soap in your bag is not hard.

Dr. Amen: I mean, you know this. Being sick is hard. Doing the right things still that you have energy, and memory, and motivation, and vitality. It's a mind shift and that's what messes people up. The M in BRIGHT MINDS is mental health because we know things like ADD, anxiety, depression, post-traumatic stress disorder, bipolar disorder, schizophrenia, chronic stress, all steal your brain. Getting them treated, not necessarily with medication but the natural ways that you and I talk about is absolutely essential to keeping your brain strong. In the book I tell the story of my father in law, who's diagnosed with Alzheimer's disease.

When Tana and I first met, she was estranged from him. She got a call from her sister saying, "Dad's been diagnosed with Alzheimer's disease. He refused to wear clothes. He won't come out of his room. He's not eating. He has multiple medications." They were completely freaked out. I'm like, "Oh, I know what to do." They brought him to the clinic, we scanned him. He didn't have Alzheimer's disease. It has its own pattern on SPECT. He had this thing we call pseudo-dementia, which is you look like you have dementia but you're really depressed. I got him up all of his medication and put him on some supplements, gave him some targeted exercises, created a social support system for him. Five months later, he did an all-day seminar at the local church. It was miraculous. He said it was like being raised from the dead.

Whenever someone gets a diagnosis of Alzheimer's disease, you have to look. Then, if you take this BRIGHT MINDS approach and go after all of these risk factors, for a significant number of people, they can get their minds back.

Dave Asprey: That is so profound. If you're listening to this, and you have Alzheimer's in your family and all, it may not be Alzheimer's. A huge percentage of Alzheimer's ... I mean not huge. A significant percentage of Alzheimer's that's diagnosed is actually this. It's a lack of blood flow in the brain. It's depression you just talk about. It's actually not bad. I think it's imminently hackable in most cases. There are some late-stage Alzheimer's, where I think pretty much no one's having success or very few people are. Is it reversible if someone's had all Alzheimer's for quite a while? What are your experiences? I mean, you've had what? 40,000 brain scans, I think?

Dr. Amen: What's the cause? I had someone Walter, 72, diagnosed with Alzheimer's, clearly going downhill. When we scanned him, he didn't have it. He had something called normal pressure hydrocephalus, which is his ventricles were too big. When we put a shunt in his brain, he got his memory back. You have to know what's the cause, or I mean what Memory Rescue really argues, the causes. The G in BRIGHT MINDS is genetics. What I have come to believe is your genes are not a death sentence. It should be a wakeup call. If you have this bad issue in your family, rather than take laissez-faire as you, "Well, there's nothing I can do about it." You need to take that serious and make sure you eliminate all other 10 risk factors if you can.

I use it as an activation, and a lot of people go, "Well, I have it in my family. I'm losing my memory. I don't really want to know. It will be bad for my insurance." My thought is, if you ... I tell you a story. There's two women on a railroad bridge. It's in Ohio. It's an active railroad bridge. It's 80 feet up in the air, and the train starts coming toward them. The video actually sees the train run them over.

Dave Asprey: Oh, no.

Dr. Amen: Now, they didn't die. They lie down flat on the tracks, but what the hell are they doing on an active railroad bridge if there's no way out? What the scan shows you is, is the train coming to hit you? Because wouldn't you want to know so that you can get off the track, so you can do something about it? When I first started doing imaging as you alluded to at the top of the show, I had lots of haters. It's like, "Oh, you shouldn't do this. There's not enough science behind it." They have said, "If you had Alzheimer's disease, there's nothing you can do about it, so why freak people out."

What we now know and I believe, that now what we know, there's so many things you can do to optimize your mind. That's what Head Strong is about. It's what Memory Rescue is about that I just think we should go about the business of doing.

Dave Asprey: I think at this point, you've been vindicated. You stuck to your guns. You've got more data than anyone else. You've also shifted though. Your very first book, which is the one that inspired me to go get a scan, Change Your Brain, Change Your Life, it completely blew my mind; what was left of it anyway. Then, I went in though and that book though was I would call it, relatively pro-pharmaceutical. Just over the last 20 or so years, you've shifted from what was more like, "Okay, if you have this, here's the pharmaceuticals and some lifestyle stuff too." Your approach now is very functional where you say, "Okay, if you have this going on, start with these breathing exercise. Start with this exercise. Start with these dietary changes. Start with these supplements. If necessary, work with the pharmaceuticals."

By not being dogmatic in either direction, I think it shows a lot of progression and just a lot of open mindedness in your own approach. What caused you to

just over the course of in 20 years of clinical practice to start being more open to the supplements may be than you were in 20 years when you started?

Dr. Amen: I wrote Change Your Brain, Change Your Life in 1998. By then, I'd already began to get excited about nutritional supplements and lifestyle interventions. They're in the original version of it-

Dave Asprey: They are, yeah.

Dr. Amen: ... because what I saw in 1991 when I started doing scans with any of the meds I was using were flat out toxic to brain function; but progression from 1998 to 2015 when I revised Change Your Brain, Change Your Life, I mean half the book is new. I mean it is really a functional medicine approach to psychiatry just because I had learned so much more, and had had so much more experience with supplementation and lifestyle interventions. I've written books like Change Your Brain, Change Your Body, and Use Your Brain to Change Your Age. I had really shifted in my thought to first do no harm. What are the natural things I can do? Now, if you're bipolar and suicidal, I'm probably going to put you on Depakote.

Dave Asprey: Yeah.

Dr. Amen: I'm not stupid. I'm going to do everything I can to protect you, but if you have mood cycles and it's really the result of a traumatic brain injury, we're going to put you in hyperbaric chamber and put you on a group of nutrients to support your brain and then see. If you're going to lose your marriage because you had intermittent explosive disorder, I'm probably going to use an anti-convulsant along with it. I actually thank you for asking that question because it just lets me reflect on the progression of my own career. I'm a classically trained psychiatrist. You have these symptoms, take this drug. I've completely lost that training and embraced the new psychiatry. My professional goal is to change how psychiatric medicine's practice by adding imaging, because if you don't look, you don't know. We should just stop lying about it. I belong to a profession where the emperor really does not have clothes, but should have scans.

Then, the second innovation I want to bring to my colleagues and the people who suffer is natural ways to heal the brain. There's so many things we can do that let's do those things first, and if they don't work, then we consider pharmaceutical interventions.

Dave Asprey: I've read across a couple of people just in the last year or so. I just got asked to review a book. I'm not going to call up the author but it was pretty much, "Here's what you can do for aging in your brain. By the way, supplements are all a waste of time." It wasn't really a pro drug thing but it was basically like something's don't work and you should stop taking them all. Another guy is really far out there, "Oh, all you need is breathing, and sunshine, and a good diet, and all this." I found that supplements brought my brain back online and

they gave me more energy than I've ever had before. When you get them dialed in, they're really good. What do you think about that? That's with the anti-supplement thing that emerges from some people. Is this because of low quality of supplements, because people are misusing them, or is this just like kind of old-pattern behavior?

Dr. Amen: I think it's more pattern behavior. They didn't learn about it in medical school or wherever they went to school; and because they didn't learn about it, it doesn't exist. The research behind using nutraceuticals is vast. When people tell me ... I was in the debate at the American Psychiatric Association with the head of psychiatry at the University of Texas, Houston. He was diminishing imaging. He's like, "There's no research behind imaging like there's no reasons behind supplements." I'm like, "How did you get through school? Don't you know how to read?" Like imaging there's tons of-

Dave Asprey: Tell me you said that out loud? Did you ask him that out loud?

Dr. Amen: I said that out loud. I say that all the time to people who go, "Oh, there's no research." I'm like, "Can you not read, seriously?" All you got to do is go to PubMed.com and then brain SPECT imaging, depression, OCD, dementia, traumatic brain injury, you can find hundreds; not three, hundreds of studies. If you type in omega-3 fatty acids, you're going to find thousands of studies. Ginkgo in blood flow. Ginkgo in memory, natural standard from Stanford, Harvard, then I actually put together all this supplement research, had eight levels of scientific evidence for memory as did sage. It's like, "Stop it. At least you know, before you open your mouth and your say stupid things, read the literature." Not all people read the literature. Yes, they can cherry pick this study or that study, but like personal experience.

I published a study on football players, NFL players who had been hit in the head thousands of times. What we did for them is put them on a multiple vitamin, high dose omega-3 fatty acids 5.6 grams, and blend ... I like higher EPA than DHA. A supplement I created called Brain and Memory Power Boost that works in seven different ways, and 80% of our players showed improvement including, not just self-report, they showed improvement in blood flow to their prefrontal cortex zones back. That's not a placebo thing. A placebo thing is not actually going to improve blood flow to the focus, or thought judgment, impulse control part of your brain.

Then, what we did is we did a randomized placebo-controlled crossover trial on a group of sort of "normal healthy people," and showed exactly the same thing; improvements in mood, in memory, and processing speed. They actually decreases in hostility using natural supplements. Not only is it in the literature, but it's also a clinical experience and our research experience. That's why I take a big handful of vitamins every morning.

Dave Asprey: Oh, yeah.

Dr. Amen: I take multiple vitamin, omega-3 fatty acids, Brain Boost because I want my brain to be the best it can be. I know what happens to people's brains over time. This year, our research team, we're doing a whole series of imaging studies on aging. We're going to do, we already published the world's largest brain imaging study on 46,000 scans. We're going to up our game and do it on 70,000 scans aging diagrams from nine months of age to 104. What happens to different parts of your brain over the life cycle? It's bad news. I've done this for a long time just looking at scans. Like your skin, as your skin falls off your face as you age? That same process happens in the brain, but both you and I know it doesn't have to. You just have to do the right things for it.

Dave Asprey: That is the best little mile log about supplements I think I've ever heard. I'm going to excerpt that, and we're going to put that up on Facebook for people because I get tired of these ... Some of them are well-intentioned but when they say there's no evidence, here's the deal. If you're under 30 right now, you know you can always go find the research in about five seconds. You just go look it up for yourself. Then, there's people who are over 30 where at ... Especially if you're over 40 like I am, the way we did research was you go to the library and then microfiche. It was really hard work to find out if there was no evidence.

At this point, if someone says there's no evidence, you can literally on your phone in the meeting, look and be like, "Wow! Here's 500 pieces of evidence. This person is either misinformed or lying." They say, "I don't like the evidence or there's not enough evidence," and those are different discussions; but when someone says, "No evidence like that," I just kind of roll my eyes. You said something else in there though, you're probably the only person I've thought to ask this. When I was writing my very first book about fertility, this is a book called the Better Baby Book. It was what we used to restore my wife's fertility. She was infertile when we want to have kids.

I did a huge amount of research on EPA versus DHA. For people listening, these are the two types of omega-3 fatty acids found in fish oil. I determined that more EPA seemed to be more important. This is going back eight, nine years when I did the research. Since then, there's been a lot more evidence around DHA in cell membranes and things like that. You mentioned that you're a fan of more EPA than DHA. Why is that?

Dr. Amen: One would think it would be DHA because it makes up a fair amount of the fat in your brain, but it turns out the research for ADHD is DHA doesn't matter. It's EPA.

Dave Asprey: Interesting.

Dr. Amen: EPA works, DHA doesn't. For depression, EPA works, DHA doesn't. Now, it seems like for anxiety that DHA is important, and for memory DHA is important; but for clearly at least 50% of the patients I see, EPA is critically important. I like a balance of about 60% EPA, 40% DHA. I just published a study. Now, we talk about the I in BRIGHT MINDS.

Dave Asprey: Okay.

Dr. Amen: I'm going to touch the letters. The I is inflammation.

Dave Asprey: Nice.

Dr. Amen: Inflammation you know comes from the Latin word, to set a fire. When you have low-level inflammation in your body, it's like you have a fire that's destroying your organs. One of the major causes of inflammation in the body is low-levels of omega-3 fatty acids. I did a study here at Amen Clinics where we did the Omega Quant test. It's a measure of how much EPA, and DHA, and omega-3 you have in your body. An optimal range is 8% or above, 49 of our 50 patients had below 8%, 49 of 50.

Then we published another study where we looked at hippocampal size and your omega-3 fatty acid level. The hippocampus was smaller in people who had lower levels of omega-3. If you think of a major cause of Alzheimer's disease, a major cause of depression, a major cause of heart disease and pain, that 95% of the population is low in omega-3. How simple is it to fix? Although, you said something earlier that was interesting that a lot of us are suffering from higher mercury levels in large part because we think we should be eating fish. I would actually make the argument that taking high quality clean omega-3 fatty acids in fish oil, it's probably healthier for you than eating a lot of fish because of the contaminants, toxins that are in fish, but everybody should get their C-reactive protein.

Dave Asprey: Yes.

Dr. Amen: Measure check. It's a simple blood test. It's a measure of inflammation. If your level is over one, you should be concerned.

Dave Asprey: That is one of the four key things that I recommend everyone on Bulletproof diet guest is it's C-reactive protein, homocysteine, and Lp-PLA2, which is a measure of whether you have damage in lining of your arteries from some sort of inflammation. Then, the fourth one ... Actually, there's a bunch of stuff that you can go there. If you have low inflammation, you're probably going to like your brain. I guess that's one thing that I've learned, and then there's all these other things around taking some fish oil. What about rancidity in fish oil? You can get some cheap fish oil supplements in giant jars at discount places. What happens if you're using low quality fish oil?

Dr. Amen: It doesn't work. Our copywriter here at Amen Clinics, Lorenzo, when he first started working for us ... I like to measure my employees if they allow me to.

Dave Asprey: Me too.



Dr. Amen: He's taking one of the big box stores fish oil. His omega-3 fatty acid probably was 5%, when it should be 8% or above. I had him stop and give him ours, Omega-3 Power, two capsules a day and his level three months later was 10; so quality matters. Plus, if you read a lot of label. Rancidity matters. You want to make sure the expiration date is there, and you want to make sure you have a high quality brand. I know, I really care about quality like you really care about quality. Then, you have to actually read the level on how much is it. Two of our capsules have 146 mg of omega-3 fatty acids where two capsules, one of the big box stores may have 120 mg. I recommend kids get at least 1,000 mg, adults 1,400 or often more. If you're on a repair situation, it's more like five grams.

Dave Asprey: Now, we're going really deep on this. I think it's awesome A: Because you really know what you're talking about, and B: A lot of people listening to Bulletproof Radio. I mean we're at 400, almost 450 episodes now. They definitely heard, get your omega-3s, but you've got details here and some of these aren't even in Memory Rescue, but I think people listening are going to change their habits based on this. I've seen studies where people take so much fish oil that it affects their cell membrane integrity. You basically gone too far where you don't have the other fatty acids that are required there. Do you ever concern about too much fish oil over a long periods of time?

Dr. Amen: I personally never seen it as a problem with my patients, but the only people I know who are taking like 20 grams of fish oil are in head trauma recovery programs. People say, "Oh, you should worry about bleeding or bruising." I haven't seen that as a significant problem.

Dave Asprey: Got it.

Dr. Amen: I mean clearly. The other problem is worse. If 49 of the 50 people who came in not taking fish oil have low levels, a much more concern ... We're not quite where we need to be, which then leads me to the other I, which is immunity and infections and vitamin D. Low levels of vitamin D are rampant in this country. You probably know this, but if you have a vitamin ... normal level according to literature is 30 to 100 nanograms per deciliter; but if you're over 40 compared to someone who's under 20, you have half the risk of cancer. Just think of that, just that one thing, you're over 40 compared to people who are under 20, you have half the risk of cancer. When I first tested my level maybe 10 years ago, I'm really switching in my head to become an integrative medicine psychiatrist, is mine was 17.

Dave Asprey: Wow, that's bad.

Dr. Amen: I live in Southern California where the sun is always out, except I'm not always out. I'm working. Just getting my level up and optimize, my appetite went away. It's when I did a big study, so the D in BRIGHT MINDS is diabetes. I published a study that said as your weight went up, the size and function of your brain went down. I'm like, "Oh, no." I coined the term called the Dinosaur Syndrome, big body little brain. You're going to get extinct. I'm like, "No." The thing that helped

me lose those 30 pounds was vitamin D because my appetite went away. Where before, I try, try, try, and at the evening I'm just always hungry. All of a sudden I'm not hungry anymore because when vitamin D levels are low, leptin the hormone that tells your brain to stop eating doesn't work and you become leptin-resistant. I thought, that was simple.

Dave Asprey: It's on my top 10 list of supplements on the blog. It has been since I think, since I started the blog, really within the first week of writing. If you're not taking some vitamin D, you're missing out because it's so cheap. Also, you got to get some sunshine to activate it, which is something that I didn't add until halfway through my recommendations that was ... It's like, a little bit of sunlight seems to do good things for us.

Dr. Amen: Dermatologist won, they made us afraid of the sun even though you were made or you evolved in the sun. The sun is critical. Now, never get burned. It's not being stupid, but let's not be afraid of it because when we were growing up, kids actually went outside and play. The incidence, learning and behavior problems in children had tripled since 1990. I'm not okay with that, and there's so many societal factors, but one of them is their vitamin D levels are terrible.

Dave Asprey: Wow. I'm happy everyone listening like if you're not taking a vitamin D, come on. Vitamin D, fish oil, are actually both on that list and certainly on your top list. I want to talk about traumatic brain injury, which isn't really a main focus in your book Memory Rescue.

Dr. Amen: Oh, but it is. The H in BRIGHT MINDS is head trauma.

Dave Asprey: Ah, that's true, but it's not the main focus. It's like 5% of your focus on the book. It's in there, right?

Dr. Amen: That's one of the 11.

Dave Asprey: Okay, there we go. Let's talk about that and specifically, I got her permission before this. My wife, Dr. Lana, stood up from her desk recently and hit her left temple on a cabinet door that swung open and gave herself a concussion. With full-on concussive symptoms, can't remember stuff. She's actually smarter than I am and remembers things better than I am; but don't tell her I said that. She literally overnight was sleeping 20 hours a day, and was just wrecked. I flew her down to see to one of the Amen Brain Clinics, one closest to us so she wouldn't have to be in an airplane for a long time to come down to Southern California where you are.

We got her SPECT scan and sure enough there was clear evidence of a recent but not too bad traumatic brain injury. You also found evidence of like a childhood traumatic brain injuries. It's the same thing that like when you do in the 40 years when we do it, a 24-channel EEG scan and something like 90% of people who come through have some evidence of like an old TBI. When they

were two, and they fell out of their high chair and stuff like that, that are still in the brain. Two questions for you. Should we be paying attention to old traumatic brain injuries? What should we do if we just hit ourselves in the head hard enough to cause damage? Let's go to that first one. What about old traumatic brain injuries? Should we pay attention to them? If so, what should we do about them?

Dr. Amen: When I first started doing scans, one of the things I've learned almost immediately is mild traumatic brain injuries ruined people's lives and nobody knows about because they see psychiatrist, or psychologist, or marriage family counselors. When at least 50% of our patients who have mental health issues, they're all result of having a past traumatic brain injury. We see it on scans and traumatic brain injuries, 90% of the time affect your frontal lobes, focus, forethought, judgment, impulse, control, and your temporal lobes, memory, learning, mood, stability, temper control.

It's a monster issue. I think of it as the silent epidemic. You should never let your kids play sports that put them at risk for traumatic brain injuries. It's that important. If your brain runs, everything you do, you have to protect it. That protecting it is a sign of love. If you are struggling with your mood, or your temper, or learning, or impulse control, ask yourself if you ever had a brain injury. I got to chat with your wife. This was really ... It was great to chat with her. It's like, "Well, have you ever had another brain injury?" So many people, they'll go, "No, no, no."

Dave Asprey: Yes.

Dr. Amen: "Oh, my God."

Dave Asprey: It's like you forgot about it. Actually, it turns out I was unconscious for several days when I was, whatever age. That might have been a brain injury, you just say it but we forget it.

Dr. Amen: We forgot and they tend to stack on each other. Having a "mild concussion" on top of trouble in the past can actually make it much worse because the reserve in your brain is less to start with. Even though like Lana thinks she's bright and highly accomplished, it's her reserve wasn't there. Brain reserve is a concept I think about, write about a lot. It's really a culmination of what have you experienced through your life that has enhanced your reserve, or has stolen your reserve. It's such a huge issue. If you've had it in the past, the most important thing like we've been around NFL study is to put the brain in the healing environment. That's why we really like hyperbaric oxygen. It's why we like brain supplements, a brain enhancing diet.

In Memory Rescue, there's a whole chapter and this awesome table that I created for each of the risk factors. Here are the things to eat, and here are the things not to eat if you want to support blood flow, or you want to support

healing from traumatic brain injury. Traumatic brain injury turns that shrimp is awesome because it boosts acetylcholine.

Dave Asprey: Wild caught shrimp right? Not the Vietnamese chemical shrimp.

Dr. Amen: Of course. A great website that I really like is [seafoodwatch.org](http://seafoodwatch.org). They can help you with what is the most sustainable. For each of the risk factors, it's what are the supplements? What are the foods that you can do to optimize it? Along with, if you've had a significant brain injury and then a concussion, it's how do I prevent the next one and being really purposeful about that? You know Chalene Johnson, I think?

Dave Asprey: Yeah.

Dr. Amen: Chalene came to see us two years ago, and she's talked about this publicly. She had ADD, and she has family history of Alzheimer's disease, and her brain was terrible. She's beautiful and her brain wasn't. That really irritated her, but she's like you. She's a high performance individual, and those are always my favorite patients because they'll do what I ask them to do.

Dave Asprey: Okay, shrink compliants.

Dr. Amen: She just did everything. Two years later, her brain's dramatically better. I asked her, and last week when I was chatting with her. We went through each of the BRIGHT MINDS risk factor. I do that with my patients. What are you doing here, and what are you doing here? Do we need to retest this? I'm like, "Okay, head trauma and what are you doing differently?" She said, "I used to do high risk activities. I would look for that mountain to ski where I was going to get that dopamine dump that we talked about." She's like, "I don't do that anymore. I look at it. I assess the risk and if it's dangerous, I don't do it. I don't do it because I love my brain."

Dave Asprey: There's a map of how you can get into the flow states. The guys behind the Flow Genome Project, I was one of the first, like I was the first investor in Flow Genome Project like figuring out the state of flow. One of the things that will put you there is this high risk extreme sports. There's a dopamine effect and there's a cascade of neurochemicals, but man, you're not going to be in a flow state if you whack your head doing that. Josh Perry, the pro BMX biker, he actually had brain tumor and some TBIs. I'm to the point now where like the easiest way to get in the state of flow is by serving others, which is like the least talked about one; but it actually works and there's neuroscience behind that. You're not going to get a TBI serving others, at least it's not very likely.

Like you, my kids, my son really wants to play soccer. He can go play soccer recreationally because he's eight and after school; but I'm not going to put him in a competitive league the way I was because I still remember heading a ball that was kicked by a goalie from across the thing. There's no way a 12-year-old

should be doing that. I know that they've taken some steps in soccer. I still like soccer, but man, I'm not going to put my brain or my kids' brains at risk because they can still take appropriate risks to learn, and grow, and face their fear, without having to take unreasonable risks for their brains.

Let's say you do hit your head. At Burning Man last year, I took a titanium knee to the head in a flying, on a bungee cord situation. Yeah, it's Burning Man. I had a pretty bad TBI from this. I immediately, literally of course I'm in a camp full of functional medicine people. We gathered everyone's fish oil because everyone travels with it who knows what they're doing, and I took all of it. I started on progesterone, and I took 10 Unfair Advantages, which is our ... The Bulletproof PQQ plus COQ10 in a delivery system, and a whole bunch of KetoPrime. Anything that would support mitochondrial function, and it was the last day of Burning Man anyway, so I got home and continued on this. Of course, I don't eat fried stuff anyway that jacks up your brain.

I stayed on that program, and I did some neurofeedbacks and some hyperbaric. I recovered very quickly from it was a really hard hit; like within five minute of being hit, I couldn't look at lights and sounds were too loud. I was all messed up. What should someone do? What are the first steps if you've just been whacked in the head? What do you do, what do you not do? How we minimize damage?

Dr. Amen: I mean, you don't put yourself at risk for again because second hits can be lethal. I put my patients when I will scan them, because your scan is good right after. That it's 100% prediction that you're going to be okay. If your scan is not good, you have to then do all the right things for it; omega-3 fatty acids, some evidence although not as good as we like for progesterone, get rid of any pro-inflammatory foods including sugar. Then, if you're light sensitive, one of the things to be screened for, it's the Irlen Syndrome. I've actually seen the Irlen Syndrome and I know you know Helen-

Dave Asprey: She's a good friend.

Dr. Amen: Very common after traumatic brain injuries. In fact, I have a lot of hockey players who tint their masks, the color that really helps their brain problems, light sensitive-

Dave Asprey: Let's do a quick plug for Helen's org. Helen's been on Bulletproof Radio. It's [irlen.com](http://irlen.com). She figured out, if you've had a TBI or you have other brain stuff going on, certain colors of light just messed with you. I got my brain back when I got my Irlen lenses. It really made a difference for me. I become less sensitive as my brain has become healthier and healthier, but what a game changer. You've done a lot of work with your SPECT scan showing the changes that just the color change can make. I think Helen just deserves recognition. Thank you for bringing her name up.

Dr. Amen: Unbelievable. I mean it is just transformative for many people who had traumatic brain injuries in the past. Then, I like basic supplements, multiple vitamin, omega-3 fatty acids, and then a brain boost. I like ginkgo, vinpocetine could say, help to support blood flow, N-acetylcysteine, acetylcarnitine, there's just some basic brain nutrients.

Dave Asprey: Beautiful. If you're listening and you just got whacked in the head, there's a good list right here. It will be in the show notes for you on what to do. If you read BRIGHT MINDS, I think you'll ... Actually read Memory Rescue, sorry BRIGHT MINDS is an acronym. You'll find a lot of information here about how to recover more quickly just if you follow the basic BRIGHT MINDS recommendations even if you had a TBI. I think you're going to be better off.

Dr. Amen: Correct.

Dave Asprey: Now, we're coming up on the end of the show. I know you've got a patient to see. I've already asked you this, but I'm going to ask you one more time because you've just written another New York Times bestseller, or maybe soon to be. We shall see. Someone came to you tomorrow Dr. Amen and said, "Look, I want to perform better at everything I do as a human being; not just my job, not just my sport, whatever but just being human." Three most important piece of advice you'd have for them based on where you are now and your career. What would you say are the three most important things?

Dr. Amen: It's funny, I just started working on my new show for next year and my new book it's called, Success Starts Here.

Dave Asprey: Nice.

Dr. Amen: Obviously, that's between your ears. At least that's how I sort of perceived the world. People don't think about that or care about it enough. Three pieces of advice and then one habit.

Dave Asprey: All right.

Dr. Amen: Three pieces, I figured this out a number of years ago and I actually horrified myself. I can summarize my work in three words. Word number one, is care. Take care about your brain. Nobody cares about the brain because you can't see it. You can see the wrinkles in your skin or the fat around your belly, and you can do something when you're unhappy with it; but because nobody looks at their brain, they often don't know until it's too late, so care. I think looking at the brain, that's what it did for me. I started caring about it.

The second word is stop doing things that hurt your brain. You need to know what the list is. We have a high school course ... Oh by the way, let me just tell people this. We have a high school course called Brain Thrive by 25. 42 states seven countries-

Dave Asprey: Love it.

Dr. Amen: ... we decided to give it free. If you just let your group know to go to Brain Thrive by 25, they can get it for free, 12 weeks 24 hours. If the business model if you want to upgrade and get three college unit of credits, it's only \$300.

Dave Asprey: Oh, cool.

Dr. Amen: You can get psychology credits from Corban University in Oregon, but it's a wonderful course. After we do the things you should stop invariably, a 15-year-old boy raised his hand, "Oh, how can you have any fun?" A game with them called, who has more fun, the kid with the good brain or the kid with the bad brain? Who gets the girl and gets to keep her because he's not a jerk? Who goes into the college he wants to get into? Who makes the most money? Who takes the coolest vacations? It's the kid with the good brain.

Miley Cyrus and I are friends. I published a study on marijuana in December, and I sent it to her and afterwards she stopped smoking pot. I'm so proud of her.

Dave Asprey: Wow.

Dr. Amen: ... life around. I texted her before a big lecture. I was going to talk to teenagers. I said, "Are you having more fun with your good habits or the bad ones?" She immediately text me back. She said, "Ha, good by a billion."

Dave Asprey: Wow.

Dr. Amen: Stopping is never depravation of love. Care, stop, do. Do the right things every day. The one little tiny habit because you and I are both interested in behavior change is I figured it out for brain health. The one thing you should do every day is ask yourself. Is what I'm going to do today good for my brain or bad for it?

Dave Asprey: Nice.

Dr. Amen: If I choose good, that's the ultimate sign of love for myself and for my family.

Dave Asprey: Very nice. What a great way to end the show.

Dr. Amen: Thank you my friend.

Dave Asprey: Now, for people to find out more about your book, they can clearly go wherever you buy books and find a copy of Memory Rescue. Is there any website that you go to? There's amenclinics.com. Anywhere else?

Dr. Amen: I think that the memoryrescue.com. If they pre-order the book, they'll actually get a whole bunch of free gifts including a PDF of one of my wife's cookbooks,

Live Longer with the Brain Doctor's Wife. We would love for them to do that. Memoryrescue.com has a lot of free resources for you.

Dave Asprey: Beautiful. Thanks for your life's work Dr. Amen. It's had a profound effect on my ability to do what I do, like more profound probably than you know. Thank you. Keep doing what you're doing for many more years, and keep calling it like it is.

Dr. Amen: Great. Love to you, love to Lana, hope I'll see you soon.

Dave Asprey: Looking forward to it.

Dr. Amen: Okay, take care.

Dave Asprey: Take care. All right, we got it. I will catch you later.

Dr. Amen: All right my friend, take care.

Dave Asprey: Thanks. If you like today's episode, you know what to do. Pick up a copy of Dr. Amen's new book, because it's got stuff in there that's going to be good for your brain and good for you, good for your performance. He's luminary in the field. I'm super happy to have him on the show.