

Enhance Cognition With Sound Entrainment

Dale Bredesen, MD
with **Marc Gilson**



Dale Bredesen, MD

Hi, everybody. Welcome back to the Reverse Alzheimer's Summit. I am really happy today to have Marc Gilson with us. Marc works in the area of sound entrainment, and it's going to be great to hear about his background and the results they're getting, etc. Marc, welcome. Thanks so much for joining us.

Marc Gilson

Dr. Bredesen, it is a pleasure to be here. Thanks so much for asking me, and I look forward to having our conversation about this exciting event.

Dale Bredesen, MD

Yes. As you and I have been discussing, anything that can help people with cognitive decline or risk for decline is what we're all interested in. We all want the same thing. Let's reduce the global burden of dementia. Let's talk a little bit about how you got into this particular approach. How did you get started? What's your background, and how did you get to this area that you feel is helping me? You guys have data that supports brain resilience. It helped to talk a little bit about that if you would.

Marc Gilson

Yes, I'd be happy to. For me personally, I think my interest in sound technology originates in my appreciation of music. I've always been fascinated by the power of music to affect my frame of mind and my mood. I'll admit, that I'm one of those people who will cry at certain pieces of music, or I'll just get inspired and energized. Music, as we know, has a profound effect on physiology and, of course, our emotions, and especially rhythm in particular, are fascinating to me. As a working drummer for several years here locally, I've always been interested in the power of rhythm. Then later, I would learn a lot more about the power of certain kinds of rhythms, certain frequencies, and certain sounds when it comes to the way that the brain functions. So that leads to the technology part, which for me personally, I owe to my dad, who introduced me to light and sound entrainment devices back in the mid-1980s. I know probably a lot of people listening to this are familiar with those as they're still around, and they're just machines that use both light and sound stimulus to cause changes in brainwave activity that correspond to

changes in your attention and your physiology, even your brain chemistry, pretty much everything. I was fortunate enough to learn from some of the pioneers who were developing light and sound machines. That's when I started to learn more about brainwave entrainment. Then, of course, later in 1996, I would meet the late, great Bill Harris, the founder of Centerpointe and the creator of Holosync, which is the specific form of sound entrainment that we use here and how that all came about. Sort of a long, serendipitous story. But long story short, I've been with Centerpointe ever since, and I've worked alongside Bill for 22 years until his passing in 2018. I just feel blessed to be a part of this field, especially now. There's so much coming out about the power of sound, the power of music, and the power of rhythm.

Dale Bredesen, MD

Yes. Certainly, with the light approach, which many people are involved with, there are certain frequencies. The gamma frequency has worked quite well. Alpha for more on the relaxation side, and do you find the same sorts of frequencies, or what frequencies do you find most helpful?

Marc Gilson

Yes, that's a common question. It's a good one. In a sense, when you look at the way the frequencies are broken down, I don't know how familiar everybody is with this, but the brain is this neurological, biological organ. You can think of it this way. There's always these little micro-electrical fluctuations happening—the synapses, the neurons connecting—and the speed and frequency with which those are firing really can tell us a lot about the state that that individual is in or the kinds of experiences that they're having, but it can't completely predict it. You've got your beta, which we're probably in right now, and then you've got alpha, which is lower, and you've got theta, which is more of a dream state, and delta. then, of course, gamma above that which you mentioned before, which has been a real intense focus and interest in recently for good reason, I think.

Every one of those states has specific benefits when you're talking about brain resilience or brain health. But I would say Gamma is a great place to start in terms of where the potential is. I know we talked a little bit about the beta-amyloid thing and other things, but even without that factor in its ability to enhance focus and sense of well-being, which reduces stress, which means a lowering of cortisol, which means the lowering of adrenaline, which means calming of the hyper-vigilant state. All of that stuff combines to produce a brain that's a lot more resilient, a lot more clearheaded, better memory, better focus, better sleep—the whole nine yards. I guess Gamma would be one that we could certainly talk about. Alpha again; we don't get enough alpha. We spend way too much time in beta. We sometimes rely on alcohol or just become exhausted before we get into a nice, calm alpha state. There are just a bunch of benefits associated with Alpha.

Dale Bredesen, MD

Yes, that's a good point. Let's go back to the idea of how this can then translate to help for people who are either at risk for cognitive decline, for people, let's say, who are starting, or people who

are in the late stages of having significant dementia due to Alzheimer's. First of all, what sorts of suggestions do you make? How, specifics on, how long, is there a concern? Do you ever drive this brain too much? Do you use a combination of frequencies? Let's say that I'm complaining to you that I've got some early, early cognitive change. What would you suggest to me?

Marc Gilson

Well, for one thing, we always start with the basics of mindfulness meditation. When I got into this field, as I was saying, it's been quite several years ago, that was a fringe concept. It was something the gurus and the mystics were doing and the counterculture was doing. Of course, today, mindfulness practices have been so well-documented as being beneficial. You've got people practicing mindfulness in the boardrooms. You've got our military, you've got pro athletes, and you've got all these people who are now understanding the value of mindfulness meditation. We already have a really good foundation to build on when it comes to well-being and health. The first thing we'd say is, if you're not meditating, drop what you're doing and start. It doesn't have to be complicated. It doesn't have to be difficult to get into posture.

What we do with our technology—Holosync, specifically—is that Bill created that technology not to shortcut the process of mindfulness meditation but to accelerate it because meditation, as simple as it is, is not easy for many of us to stick to and do. Holosync not only makes it easy to do, but it makes it, so you just sit down, put the headphones on, and you're off, and we can get into this in more detail in a bit if you like. But there are some specific ingredients, I guess you could say, that make Holosync very potent in terms of what we call a neural driver. With the scenario you describe to me, what we'd want to do is give your brain a stimulus to cause your brain to do what it's naturally built to do, which is to take a certain amount of stimulus, a certain amount of entropy, and reorganize it and grow in response to that. That was initially the idea behind Holosync. We can get into more technical details if you're interested in that thing on a sound level. But that's the principle of neural driving—pushing that nervous system to grow, change, adapt, and become stronger and healthier over time.

Dale Bredesen, MD

Yes, it's interesting. Of course, there are many things in brain training. Another way to push your brain. When is pushing too much? With weights? We all know you push too hard with weights too quickly. You don't work up to it. You can stress, strain, and destroy or damage. Do you ever feel concerned about that? How do you set the timing? Is there a chronobiology to this for the best outcomes?

Marc Gilson

Yes, the timing is a factor. I think one of the nice things about this technology, which makes it accessible and makes it safe, is that you have this built-in safety valve when you're talking about neural driving because people do ask, Is it safe? That's a very important question. What happens? Yes, we're giving the brain a potent stimulus, but what the brain tends to do is anesthetize itself if it gets too much; basically, it stalls. It's like flooding the engine of a car. If you

don't throw your Ferrari into seventh gear immediately and drive off, you'll kill it. What happens with the brain is that it ignores anything that it can't process or handle. There are occasions where, in the worst-case scenario, somebody gets a little bit of a headache or has a couple of sleepless nights. That is more due to what we call upheaval overwhelm, which is a process of the system releasing a lot of old, unresolved mental and emotional stuff going through those changes. It's a little bit like going to the gym; hopefully, you don't overdo it to the point where you've done some damage, but you might have a little stiff, sore muscle every once in a while, and that's a sign you're giving your body enough stimulus to cause it to change and improve.

Dale Bredesen, MD

Do you have one that you can show people? Of course, we want to make these things as actionable as possible. Do you have something there that you can show people? This is what we use?

Marc Gilson

Well, do you mean in terms of the technology itself?

Dale Bredesen, MD

Yes, exactly.

Marc Gilson

Well, we're going to have something at the end of the conversation, and I think that will give people a real experiential chance to listen to Holosync. I'll tell you more about that later. But absolutely. You can have me on here. We can talk about Holosync, sound, and treatment for three or four hours. But there's no substitute for experience.

Dale Bredesen, MD

Well, that's great. Let's talk about giving me an example you mentioned before we came on. There are some amazing testimonials, and of course, we hear the same thing. When we heard the very first people saying, I'm getting better from my Alzheimer's. Exciting. It is always great to hear about people who are improving. Of course, we learn a lot from both the people who are improving the most and the ones who are improving the least. What didn't work? If you could give us an example of a testimonial from someone who used your technology and saw some improvements.

Marc Gilson

Yes, I can give you a nice little example that comes to mind when you say that. There was a gentleman who was getting you to 70, and 80. He called me before he had started using this sound technology. He said, My memory isn't what it used to be. The doctors think maybe I'm leaning into Alzheimer's or something along those lines. He goes, and I'm really worried about it. Naturally, he said, One example is that I've always done the New York Times crossword puzzle. I've done it for years. Yes. But over the past two or three years, I've noticed I'm not completing the

puzzles anymore, or it's taking me a long time to do them. He had a little bit of a benchMarc there—not a clinical benchMarc, but an experiential benchMarc. He started using the program, our main program, the Holosync Solution program, and he called me back just six weeks later, which isn't that long. He had been dedicated to it, doing it pretty much daily.

Dale Bredeesen, MD

He goes, how long each day?

Marc Gilson

He was working about an hour a day.

Dale Bredeesen, MD

About an hour a day. Okay.

Marc Gilson

That's what's recommended. Some people do a little more. Some people do a little less.

Dale Bredeesen, MD

This is about continuous or broken up.

Marc Gilson

It's an hour sitting. It's one hour a day. People can do it in the morning or that evening to find out what works best. As I said, if you're people to have the hour and a half hours, it's like exercise, a little better than nothing at all. But he said, I can't believe this, but I'm doing the crossword puzzles. I'm completing all of them now, even the tough ones. I think those are the Sunday ones and I'm doing them in record time.

Dale Bredeesen, MD

Wow.

Marc Gilson

Again, this is anecdotal, but that was a sign to him, and he had seen significant improvement in this one little cognitive task that he was very familiar with. He continued to use it and benefit from it. I heard from him about a year after that. His prognosis in terms of his mental decline had not worsened at all. It had stabilized and improved a bit. That's just one story—that thing that we hear quite often.

Dale Bredeesen, MD

Everything starts with anecdotes. You've got to start somewhere. From anecdotes to trials to the mainstream. It's always great to hear about anecdotes where there was real success. If you could talk for a minute about resilience training and resilience conditioning, how do you use sound to do that?

Marc Gilson

Yes, resilience conditioning. Resilience training is, I think, huge. I think anytime anybody asks me what's the most important thing they can do for their brain health, I'm sure you get asked that question a lot, of course, as well. But especially when it comes to preventing things like Alzheimer's or other age-related or memory-related problems. The answer I give is that you build brain resilience. It's not just me. Of course, the researchers are working hands-on in the field, like yourself, who often talk about this concept of resilience. The value of this is something we've been seeing in real-world results for almost 35 years: conditioning through sound dramatically improves the brain's ability to handle stress. The way we talk about it is that if you can raise your brain's stress threshold, then you're far less susceptible to all kinds of negative stress. We're exposed to so much chronic stress.

We coach people, people of any age, to train and condition their brains like you would a muscle. You challenge it, stimulate it, and teach it some new tricks. You get all those parts of the brain; the brain is fired up and engaged. You can exercise your body, which is great, but we sometimes forget to exercise the brain. For us, the best way to do that is a lot easier than a lot of people think because brain resilience is really what we're about, and it all has to do with what we call neural driving. That's one thing that sets what we do apart from other kinds of brain technologies, which are great. But we use the basic brainwave entrainment process with specially tuned carrier frequencies that increase the potency of the stimulus that we're feeding to the brain. The idea quickly is not just to replicate those deep states of meditation, which by themselves, as we said, have numerous benefits. But to take advantage of that natural rhythmic responsiveness that's built-in and baked into the way the brain is designed to improve, how efficiently and effectively it works, I can get into more detail here if you're interested, but that concept of neural driving is the secret sauce; that's what creates the significant changes in the way people's brains function and how well they improve over time.

Dale Bredesen, MD

Of course, we have many people who have cognitive decline and who are working on or using a protocol to improve. They include things like brain training and doing things like, whether they use Brain HQ, Elevate, or one of the many others that are available. That's one way they're driving their brains in that way. Then some are using light stimulation, as you mentioned earlier. Some even use magnetic stimulation, for example. The question is, this approach with sound technology, is this complementary? Is this synergistic, or is it antagonistic? What is your sense of the relationship between these different forms of brain stimulation?

Marc Gilson

That is a really good question. First of all, in our view, it is complementary. We're aware of some of the research that was coming out from MIT about gamma exposure using both sound and light to entrain the brain using light. That's a process called photic driving. This is different from binaural beat entrainment. But, for me personally, having been steeped in this for so long, everything is vibration, and people throw that out. I don't know. I've heard that for years, but I'm

only finally beginning to understand it. From what we know about the rising incidence of Alzheimer's and other neurodegenerative problems, I think that resilience is key. To me, sound therapies in particular hold a lot of potential to help with that. It's a field I work in, so I'm going to say that.

But everything is vibration, even light itself. We've been hearing sages and gurus tell us this for centuries. Of course, now it's not the sages and gurus; it's the physicists. Vibration is the language of the universe, and that includes our brains and bodies. It's the expression of existence if you don't mind me getting a little cosmic. It's what makes solid matter solid. It's what allows us to see, smell, hear, and feel. When you can harness the power of vibration and frequency, well, now you are dealing with the fundamental energy and the physics of pretty much everything there is. I think that, and I have a feeling you probably agree with me. Other things will go with us. But I feel like in the next 10–15 years, you're going to see sound, light, and vibratory medicine. Things like this come to the forefront and show what they're capable of in terms of healing, maybe curing, and preventative measures as well.

Dale Bredesen, MD

Yes, great point. The other thing that comes up is that about two-thirds of the patients will present with a short-term memory problem, essentially a memory consolidation problem so that they remember their first-grade teacher. But they don't remember what they had for breakfast—that thing. Whereas the other one-third will present with what we call your non-monastic presentations, which can be executive problems, for example, planning, things like that, dyscalculia, for example, people with PCA have visual perception issues, prosopagnosia, apraxia, agnosia, things like that. My question is, when you're using this sound entrainment, do you see more of an effect on memory? Do you see more of an effect on other specific modalities? Or what are the things that make a difference here?

Marc Gilson

Well, I'll tell you that I'll give you one quick example of that because that's another great question. In terms of, for example, short-term memory, one quick example that I'm sure a lot of people know about is that the brain is dualistic by nature. The two cerebral hemispheres, you're right and your left. As you well know, there's this band of neural fibers called the corpus callosum that connects the two sides. It's like a bridge that carries traffic or information to and from each side of a healthy brain. There's a lot of synchronous crosstalk that's happening over that bridge. so the traffic can flow very smoothly. These two sides of the brain need to communicate clearly and efficiently. But as we age, the flow of information can become slow or out of sync. Traffic, in effect, slows down. You can get traffic jams, and in that experience, you mentioned something like it. You see somebody in a crowd, and that person is in the right hemisphere. I'm generalizing about the specific roles of these hemispheres. But in the right hemisphere, I know that person. The left hemispheres, like going through the Rolodex. I know that person, but I can't pick the name out. We know the hemispheres aren't quite that specialized, but that's a common experience.

Pulsing with this entrainment, increases the synchronous crosstalk, the synchronous neurological activity between the two sides of the brain. It speeds up the flow of traffic because we haven't gotten into this. We can do it if you like. But the process demands that each side of the brain process two independent tones simultaneously to create a third phantom tone, what's called a beat frequency. It's effectively demanding that the brain and those two hemispheres connect up, handshake, and do a lot of cross-colossal communication. so that by itself, which is a real basic benefit of this technology, can help increase that memory situation. Now, one more quick thing. The other piece of that is the long-term memory thing you brought up as well.

We know from other research that mindfulness meditation can strengthen the prefrontal cortex, the part of the brain that makes those executive decisions that make it easier to access memories, so it improves the hippocampus, the hypothalamus, and all those brain areas. It also, almost more importantly, soothes the limbic system. For most of us, I'm sure you've seen this in your work. Our limbic system is on overdrive. Because it's that fight or flight. We tend to be, like in Star Trek, the Starship Enterprise, always on red alert because our bodies are hyper-vigilant. We have a high cortisol. We have high adrenaline. When you can soothe that limbic system and get out of that fight or flight mode, there's a correlate of improvement, not just in your stress levels but in your memory, in your focus, in your ability to think clearly and to access, both in terms of retention and recall, making you remember what you're reading. You don't get to the bottom of the page and go, What don't I just you? I got to read that.

Dale Bredeesen, MD

Could you give me a profile of a person who benefits the most from this protocol? We look at the same thing with our protocol. There are people we can see ahead of time. These are the people who are going to do their best and benefit the most. These are the ones that are going to benefit the least. Could you give me a profile? Who are the people that are going to benefit the most from this technology? Who are the ones where you may think this may not work as well?

Marc Gilson

Well, of course, I don't know if this will be a satisfying answer. As a for-profit company, everybody's welcome. We want to get the hull sink into the hands of as many human beings as possible. I would say, all.

Dale Bredeesen, MD

We want good outcomes, so we want to use it for the people where it's going to help them a lot.

Marc Gilson

No doubt. We do personal growth work, which, of course, means different things to different people. I'll say that when somebody comes to us, they could be looking to improve their relationships or their financial success. They could be looking to get rid of an old bad habit or heal some old unresolved trauma or mental-emotional wounds. But what we're talking about

today has more to do with a group of people who come to us and say, I'm concerned about aging. My brain getting older. I'm concerned about Alzheimer's, it runs in the family. For us, that's a no-brainer, if you'll forgive the pun because once you're stimulating the brain with this neural driving process, you're giving them. We can't say this is going to cure Alzheimer's, but we can tell you that it's going to help mitigate a lot of the effects of aging, especially the effects of chronic stress on the brain, which are significant.

When you can improve the brain's ability to deal with stress, there's a correlational improvement in almost every other area of your life. We always say around here that you want to improve your life. It doesn't matter what it is. You improve your brain first and foremost. I don't know that there's a specific profile, but I would say that there are a lot of people in their 40s, 50s, and 60s. It used to be just people in their 70s who would come and talk to us about their concerns about brain health. People are beginning to become more aware and are waking up to the fact that brain decline and the effects of aging begin way earlier than that. You have a lot of people now, even in their late 30s and the early 40s and 50s, who are like, this is a concern to me. I need to take care of my brain and not just eat a healthy diet and drink enough water.

Dale Bredesen, MD

No question. Let's talk about the stages. As a result, there are new blood tests now. You can pick up changes in phospho-tau 217, for example, before you have any symptoms at all. Now we're going to have a lot of people out there who are in what's being called stage one Alzheimer's. It's saying your brain is already beginning this downsize thing that some are like pre-diabetes looking at the beginnings of insulin resistance that's going to lead to diabetes down the road. Let's compare people who are asymptomatic but already have an abnormal phospho-tau. They're then progressing into subjective cognitive impairment, SCI, then going into MCI, mild cognitive impairment, and ultimately dementia down the road. Is there a place where you say it's too late, or is this something that can be helpful to all brains?

Marc Gilson

Well, we believe it can be helpful to all brains. I can't tell you that we've gone into a clinical situation with someone who's got a severe condition like that and put Holosync on them, and we were able to change that. Now, if that happens, we certainly have people who, for example, someone might say, Can I put this to my grandmother or my grandfather? We say, of course, it's safe. Try it and see. But I will say, if you think about groups like maybe you've heard of Alive Inside, they do great work.

Dale Bredesen, MD

In the film.

Marc Gilson

Yes. It is beautiful, and what they do, of course, is that they're giving music to people who are often in a state where they're pretty severe, their memory loss is severe, things like that? Of

course, it's not necessarily a cure for everything that ails them. But you see responses; you see reactions. Our goal is similar to Holosync. We can't go out and say that, We're not nutritionists, for example, yet people using Holosync often eat better. Why is that? It's not because we put them on a diet, but because mindfulness meditation, especially with Holosync, leads to better decision-making, which means they're making better and healthier choices. We're not psychiatrists, but our clients always tell us about healing and releasing, sometimes years, decades, really, of old, unresolved stuff. We provide coaching and support that complements other therapies and so forth that the client might be engaged in. Our role is just to support health and improve brain function in whatever way we can. We think we've got a pretty good tool that does the job pretty well.

Dale Bredeesen, MD

Then you've mentioned several times now that mindfulness and sound technology, could you talk a little bit more about the relationship? Let's say someone's going to be doing this for an hour, and I would be interested in whether you use both morning and night chronobiology. It turned out to be huge for, when you eat, when you're exercising, all these things. Yes. I would love to know: what do you guys recommend starting in the evening? In the morning, late at night, or in the middle of the day? When you're doing that, do you tell people you should now be doing mindfulness meditation while you're doing this? Should you be doing it with your eyes closed, and your eyes open, or should you have a mask on? If you could talk a little bit about the specifics, that would be helpful.

Marc Gilson

Yes, sure. In terms of the usage pattern, so forth. First of all, in terms of chronobiology, for us, consistency is what matters more than the specific time of day. But what we do is encourage people to experiment. For one thing, asking someone to meditate even for 20 minutes, let alone half an hour or an hour, especially someone new to it. That's asking quite a bit. Everybody's busy. What we find is that people need to be free to fit in where they can. For a lot of people, that tends to be early in the morning or late at night because that's when we're usually most free of distractions and have a little bit of time to ourselves to sit down and listen. Some people do find it, I'm doing it at night, and then I get energized. I decided to do it in the morning, which is working better, or vice versa. Everybody responds differently. However, as you mentioned, due to circadian or arcadian rhythms, people tend to perform better on diets when they eat at a consistent time of day, exercise consistently, and sleep at a consistent hour. The same thing is true of meditation if you can. It doesn't always have to be at 2:00 precisely. But to stick, develop a routine experiment, take a couple of weeks to figure out what works best for you, and then stick with that. As with a lot of things, consistency always pays off.

Beyond that, we want people to adopt the practice and use it the way they want to. We don't make the distinction necessarily between mindfulness meditation and listening to Holosync because they're the same thing. We just encourage people to sit and listen to it. If you sit down, you can lie down if you wish. But people tend to get better results when they're sitting upright.

You put some earbuds in or some headphones on, you close your eyes, you push play, and then you drift off. Sometimes you have a wonderful, magical, meditative, and deep experience. Hopefully, sometimes you won't. But either way, just like exercise, sometimes you love it and sometimes it's a drag. But if you do it, you're going to see the results. That's what's most important to our clients. They're more focused on the other 23 hours of the day and how that one hour benefits them. The last thing I'll say about that is that just when people begin, it's always like, How am I going to find the time? I usually say, Give it a couple of weeks and then see what happens. Because 99% of the time, what happens is they start to see the benefits, and all of a sudden that hour a day, which was hard to squeeze in, moves way up on the priority list because, for us, meditation is not supposed to do a specific thing per se. It's foundational. It's a foundational wellness practice that just leads to all kinds of other benefits now.

Dale Bredesen, MD

When you start with people, is it always the same frequency? Are you always starting in the gamma, or are you changing over? What do you do in terms of frequencies?

Marc Gilson

Well, of course, we have a lot of different programs and products. But when we're talking about the main Holosync solution, we're working primarily in Delta waves, it would take quite a long time to get into the reasons for that. But the short version is that delta waves tend to have less randomization. They're nice, slow, deep waves. Because we're using very low carrier frequencies, it can be a little more challenging for the brain. We want to make it easy for the brain to get into that lockstep. Those nice, even delta waves are ideal for that. Plus, they tend to be higher-amplitude waves. That's more energy in the wave. The other reason is that you get your conscious mind out of the way. Delta is usually associated with sleep. But in this case, we use it for deep meditation. You're not busy thinking, I've got to make my grocery list; I've got to make that phone call tomorrow. Instead, you can take advantage of that mind-awakening body-sleep state.

Dale Bredesen, MD

But then, where does Gamma come in?

Marc Gilson

Gamma comes with other soundtracks that are supplemental or additional. Some people use just a gamma track every day. A lot of that's because some of the brain science we've been talking about has come out about it. For me, if somebody says, Why should I use Gamma? I'm going to tell them a little bit about the history of Gamma. You're probably quite aware of this. 20 years ago or so, 25 or 30 years ago, nobody talked about Gamma because it was considered an anomalous brainwave state that was associated primarily with stress. I think one of the first things that happened is that the Messenger Foundation, I believe, did a study. I may be wrong about that, but there was a study conducted on these Buddhist monks who are practicing the Medal of Honor meditation, the loving-kindness meditation.

Normally, you stick EEGs on a meditator's head, especially a monk who's been practicing for a long time. You see their brainwave patterns go down, down, down, down, down. Instead, for these meditators, there were these gamma spikes—about three every hour—and they were correlating that with feelings of well-being. It was serotonin that was being released. Dopamine was being released. They were happy monks. That was the first time people started tuning into, well, maybe gamma is not just stress; maybe it's wellness, happiness, and optimism. Sure enough, that's what we've seen. Anyway, I guess I didn't answer your question, but we recommend Gamma for just about anybody who's looking to reduce stress and improve brain resilience.

Dale Bredesen, MD

We were specifically interested in people who have cognitive decline. What would you recommend for someone since you've got these different programs? What do you recommend for people with cognitive decline?

Marc Gilson

First of all, I would recommend Gamma for sure, but I would also recommend working with our main program because Delta is what gives you that neural driving response. It's one thing to reduce stress. What we want to do is push that nervous system to grow and change. With Delta, we're using the most potent version of the technology that we produce. We're using the strongest neural driving effect that we can. We're causing the system to reach a saturation point and then grow, respond, and adapt. It's the same process, Bill based a lot of his concept or reference structure earlier precautions work, and in systems theory, just structures open systems, and the brain is a beautiful open system. What that means is that it can take in a lot of stimulus. It loves to take on some entropy and then organize it. That's how growth happens. For a lot of us, that stops by the time we're done with college, roughly. Now, we're trying to trigger that. For somebody concerned about brain health, I spend 20 to 30 minutes a day working with Gamma, and then I'd spend another 30 to an hour if I could working with deep dive, deep delta neural driving stimulus that causes that reorganization of process to exercise that brain and cause that bridge of change.

Dale Bredesen, MD

Which one first? In other words, do you do Delta and then Gamma, or do you do Gamma and then Delta?

Marc Gilson

I'm aware that it matters. I would say that for me, Gamma makes more sense early in the day because it tends to energize you quite a bit. Of course, Delta is usually quite ideal before sleep because you're already heading down into a deep state.

Dale Bredesen, MD

Have you ever seen anyone who has cognitive decline do this? It seems to make them worse, or at least it was associated temporarily with a greater worsening. Is that a concern?

Marc Gilson

Not long-term, no. We do see people run into a certain amount of overwhelm. One of the reasons that we have a coaching team and a support team here, and that's all they do all day long, is to be supportive and help people with their experiences, because that saturation process can create what we call overwhelm. It's intentionally a very broad term, but any discomfort that comes from the process of pushing the nervous system in this way, we're here to remind them. In rare cases, you have somebody who maybe is bringing up so much stuff so quickly that we say, Look, take a break, take a couple of days off. As I said at the beginning of the conversation, the brain tends to be pretty good about just turning the volume down. If it gets too much, it doesn't maintain lockstep with the entrainment stimulus anymore. It falls out of lockstep. We call it floating up. It floats back out of that deep state because it's too intense, like someone who's holding their breath under the swimming pool. At a certain point, they're compelled to just come back to the surface. But for most people, a little discomfort is minor. People might have some intense dreams. People might feel, I'm feeling pushed. I'm feeling sensitive. People say I cried at a McDonald's commercial on TV last night and stuff like that. That's a sign that their system is feeling that push in the same way that if you feel some stiff, sore muscles, that's a sign you've been working out.

Dale Bredesen, MD

Do people who do microdosing of psychedelics benefit, and have you had people who are doing both together?

Marc Gilson

Yes, there have been a few. I don't know how many people call up and tell us that. But of the few that I know, I think those people benefit more if they do that at a different time of day. The entrainment process, getting the brain to match that entrainment stimulus to get into lockstep, especially when you're dealing with low carriers, which we do, is asking quite a bit of the brain. Sometimes, maybe you've had too much coffee, maybe you've had an enema, maybe you're microdosing, or maybe you didn't sleep well. All of those things can occasionally factor in and make it just that much more difficult for the brain to get into those deep states. We try to say, just passively sit, listen, and if you want to do other things, great. But to listen to this technology, just don't do it.

Dale Bredesen, MD

Well, so this is all very interesting. It sounds like something could be very beneficial for many people. If you could talk a little bit about the gamma brain refresher, I understand you have a gift for everyone, which was great. Thank you very much. Please talk a little bit about that, if you would.

Marc Gilson

We've been talking about Gamma often throughout the conversation. Yes, we have a gift that we want to offer everybody listening to our talk today. I'm going to tell you, I think this is something pretty special. We're offering one of the most powerful soundtracks that use the gamma waves that we discussed earlier to help build brain resilience. It's called a gamma brain refresher. Now, we talked about this. There's been a lot of interest in this issue with beta-amyloid plaques and so forth. I think, and please correct me if I'm wrong, but I think some of your research has shown that amyloids aren't quite the culprit here, necessary. But you take a much more comprehensive view of that. But for us, gamma is not just about beta-amyloid; it's about a little bit of what we talked about before. If you look online, you'll see some studies link gamma waves with heightened levels of thought, clear thought, and focus. When you produce a lot of gamma waves, you tend to feel happier and more receptive to new information. Your concentration and your memory tend to improve, but people report more peace and more centeredness. As a study, I think I'd help find something that says gamma rays are evidence that you've achieved peak concentration. Then you can Google this on your own about the power of gamma. I already talked about the Medal of Honor study with the monks, who are registering gamma rays. anyway, when we were invited to take part.

Dale Bredesen, MD

Say that: how do people access this?

Marc Gilson

What we wanted to do was offer a soundtrack that did this and get it into the hands of as many people as possible. We're offering everybody a chance to experience Holosync Gamma. That's what the Gamma Brain Refresher does. It's 20 minutes long. All you have to do besides downloading it is grab your headphones or earbuds, sit back, close your eyes, and listen. Ideally daily. I recommend mornings, but you can do it any time you want. All people have to do to get a hold of the soundtrack is visit the following website: What I usually need to do is say it, and then I'll spell it out just for clarity. The website is if you go to www.holosync.com.

Dale Bredesen, MD

H-O-L-O-S-Y-N-C dot com.

Marc Gilson

Forward slash refresh R-E-F-R-E-S-H. Again, www.holosync.com/refresh. Download it. Play it on your phone, your laptop, or whatever. Always, we crave feedback. Please reach out to us. Try it out and let us know what you think. Tell us what you think. If you have any questions, Of course, we've got our support team here to help you along the way as well.

Dale Bredesen, MD

That sounds excellent. Marc Gilson, thank you so much. This sounds very exciting. It was great to hear that you've had good results with it. It was great to talk to you. I hope that many people will benefit from this sound and entrainment. Certainly, as you said, this has been around for many years. But continuing to improve things is always what we're looking for. Again, anything that's going to help people improve their cognition. It was great to talk with you. Look forward to future discussions.

Marc Gilson

Very good. Yes, I wholeheartedly agree. Thank you again, Dr. Bredesen. It's been great talking with you today.

Dale Bredesen, MD

It was great to talk to you.

