How Sound Therapy May Help Rebuild a Failing Brain Network Transcript

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Introduction and Sound Healing Background

Hello and welcome back to the Reversing Alzheimer's 2.0 summit. I'm super excited today to be talking about a very interesting topic to anyone who is helping people with Alzheimer's, is concerned about their own cognitive decline, or just interested in learning more about how the body heals.

Today I'm going to be speaking to Mark Gilson. He is Centrepoint director of Client Services and Chief Product Designer, and has been involved in this work for more than three decades.

Mark originally is a pioneer in neuro audio technologies and has designed dozens of bestselling meditation programs, hosted live consciousness events, or authored hundreds of articles on personal development and meditation.

He's created online courses and has a lifelong passion for therapeutic power of sound and music. And that's what we're going to be talking about today.

His goal is his commitment is to help others unlock their potential and live lives. And it's evident in all he does. And Mark, we're really grateful to have you back on the summit.

Hey, James, and it's really great to be here. Thank you so much. I'm looking forward to our talk. And hey, remind me before we're done, cause I've got something special as well to share with the audience before we complete our talk today.

That's great. All right, well, let's just jump into it. I mean that when you when you think about Alzheimer's, I don't. It's not the first thing I think about with sound.

But I also understand that, you know, the future is, is energy and sound. And so I'd really love to understand why you think sound is relevant when we're talking about healing the brain and preventing and reversing Alzheimer's.

Sure. Yeah. I mean, that's a great place just to kick things off. I mean, the short answer is just because sounds one of the fastest ways to recondition the nervous system, but there's more to it, obviously.

So, you know, I like to start here. You know, the brain operates in rhythms essentially all brain activity is organized vibration, right? So organized in a healthy brain anyway.

So the language of the brain is the various neuro electrical patterns of neurons firing a specific sequence is sort of how like, you know, the pistons in a combustion engine have to fire in specific sequence.

So sound is one of the most effective ways of tuning the brain and influencing both the frequency and the amplitude of these firings in the brain. So when we introduce steady, patterns of tone or rhythm with sound technologies like hollow saying, the brain begins to synchronize with those cells so we can cause changes in the state of the brain that can affect attention and mood and breathing and sleep.

Why Sound Matters for Brain Health

So sound isn't something that we just hear, which sometimes, you know, people's ears perk up when I say that it's something the brain and body respond to at a very fundamental level, because our entire bodies, and for that matter, as you were alluded to at the beginning, the universe itself is based on vibration, on cycles, on patterns.

So there's this common method to, you know, sounds just something we hear audible voices, music. But the fact is to hearing is really a whole body experience.

You know, it's it's somatic in nature. I mean, we feel sound more than we hear. Our bodies are basically resonant chambers. So sound resonates through our bones and our organs and our tissues.

So really the way I like to think about it is sound is vibration first and perception second. And so frankly, as you well know, well, there's some remarkable new drugs on the horizon.

It looks very promising in some ways. I think there's a strong case to be made for, including drug free methods as well. And I think sound therapies are really emerging as a very promising way to do that, to build resilience and plasticity and coherence, which in my mind, anyway, are really just three golden tickets to to brain health.

Yeah, I'm really excited to to chat about this because I'm really deep into this, this way of thinking at this moment. But before we go any further, you know, I've, I've seen research on the power of dance, you know, for, for reversing cognitive decline or, you know, and, and building back networks efficiency.

And it seems to me that, you know, obviously the, the act of dancing is one thing, but typically the act of dancing is being done in the context of hearing sound.

Something seems like there's there's a lot going on. There's a physical movement as the rhythm, but also there's the, there's the sound that's being experienced by the dancer as well.

Yeah, 100%. I mean, you know, we're sort of hardwired for that, right? That kind of response to rhythm. I mean, if you ever have that situation where, you know, you're sitting around talking to a friend, but there's music playing and also you realize, you know, you're kind of tapping your foot to the beat or whatever.

And, you know, even babies, you know, sound is really the first sense to fully form even before a baby is born. And as little as, you know, 2 to 3 months babies can respond to sound and can keep time, keep rhythm with a beat.

So it's really kind of, you know, hardwired into the way we function to be responsive to us. So it makes sense that, you know, the brain's natural native language of rhythm and vibration carries over into something like dance, as you were saying, So tell me what actually happens in the brain in Alzheimer's that makes interventions like sound, I guess, potentially useful?

Sure. I mean, I can give you my perspective on it. I think my understanding of my reading and studying is that Alzheimer's is could be said to be fundamentally a disease of accumulation and disconnection.

So there's tons of theories out there, as you know, and you've done some great work around this. But what causes Alzheimer's? I think it's fair to say we probably don't have a 100% complete answer to that yet, but there's a lot more to learn.

But one of the leading theories that's been out for a while is that, you know, there's two main culprits that get talked about a lot the beta amyloid plaques, the sticky protein clumps that build up between neurons and disrupt communication.

And then there are the tau tangles that twisted protein fibers to form inside the neuron and essentially kind of strangle them from the inside out. And over time, these things tend to starve or slow down brain cells and cause neurons to stop functioning, which of course, is a devastating thing to experience and to witness.

If you've had a loved one who's experienced this, I think part of it it is important to point out the healthy brains run on that synchronized electrical activity I was talking about.

So that means different regions of the brain always talking to each other in rhythmic ways. And Alzheimer's is known to disrupt us in a very profound way.

It's sort of yanked a plug out of the neural electrical system. Right. So this is kind of, something that we've talked about before. Gamma oscillations in the brain at around 40Hz are particularly affected in Alzheimer's patients.

Alzheimer's as Network Disconnection

And these are critical for things like attention, memory binding, the coordination of information across brain regions. And so up until relatively recently, not that many people were really paying attention to gamma brainwave activity.

But now we've learned that gamma is really critical for our brains health and functioning because of its ability to stimulate this across brain communication networks.

So I like to kind of think of gamma waves as the brain's internal Wi-Fi, you know, and Alzheimer's essentially degrades that signal. Calls get dropped, so to speak, which is like a lapse in memory.

Things get slow to load, communication is interrupted, and then I'll just mention this real quick. There's another challenge, which is the waste clearance problem.

Right? Which is gets even more relevant to sound interventions because you know what happens when you don't take the garbage out of the house for a few weeks, right?

It builds up, it rots, it starts to become really toxic. And the brain happens to have its own waste disposal system called the clump fat system, which is most active during sleep and flushes out all those toxic proteins, including that amyloid plaque that builds up in all of our brains in the course of a day in Alzheimer's patients.

That system is impaired. The brain loses its ability to clean itself effectively. Toxic buildup accelerates, which of course worsens the brain's plasticity and overall functioning anyway.

Jumping ahead, some of the recent research, by people like Doctor Lisi at MIT is exciting because it's showing the potential of gamma rays, both sound and light waves, by the way, to help mitigate these problems.

And so I give you one example that I should mention. As you probably know, this is still in clinical trial phase, but there's a lot going on with this.

But what happens when you expose the brain to gamma frequencies at 40Hz and someone with early on stage dementia or Alzheimer's? Well, according to the research, for one thing, it can re and train the brain toward more gamma frequency activity that Alzheimer's has suppressed.

So basically resets that Wi-Fi. Secondly, it stimulates static activity, helping the brain resume its job of clearing out that toxic waste buildup. And then third, it increases neural synchronization across regions that have become disconnected.

And that's the coherence part I mentioned. So this gamma research I mean, this is just one example of how sounds being used to help brains better cope with the effects of aging neurodegenerative processes that lead to things like Alzheimer's.

It's interesting. So, you know, since the last time we spoke last year, I was listening to Doctor Bateson give a lecture in October, and he described Alzheimer's as network insufficiency.

Thinking about all those different networks that are in play, there's the biological networks and things that we would look at in functional medicine, but it seems like this is a then a network.

When you said a loss of signal, you know, that that really makes me think that you're thinking about it in the same way. Yeah, definitely. I mean, I think that that's probably borne out not just by, you know, the theories, but by the, the research that's being conducted now.

So, I mean, coherence is big. The ability of the brain to communicate within itself because the brain isn't just one thing. Right? It's it's a lot of different systems that have to coordinate, interact in very precise ways.

And if you disrupt that in any way, shape or form, you're going to sense it, you know, you're going to have issues. I've heard you say coherence and how sign is disrupts that coherence.

Let's dive into that. I mean, what are you talking about in there? What is the sort of methodology, what is the physiology. And how do you see that? How do you see that as the driving factor here?

Yeah, I mean, it's a good question. You know, Alzheimer's is you know, it's not just about memory loss. That's one of the kind of common misconceptions about the disease that, unless you've experienced it or looked at it, you might just think, well, you know, you have bad memory.

I mean, obviously memories affected often dramatically, but what's really happening is a lot more systemic. And so, like we were talking about these widespread disruptions in connectivity between these different brain regions, a breakdown in neural synchronization, significant changes in sleep architecture, and a measurable increase in stress chemistry throughout the brain and body.

So when the brain's timing coordination begins to break down, everything suffers. Cognition, mood, language, motor function. And these are not isolated systems, right?

They depend on this constant rhythmic communication between different regions of the brain. So when the communication degrades, the effects ripple outward into virtually, I mean, every area of a person's life.

And I mean, frankly, this is true for all of us, not just people suffering with neurodegenerative conditions, because chronic stress can do the exact same thing to our brains.

Disrupt the flow of connectivity. A stressed brain is a poorly connected brain, right? So sound based approaches like hollow sync are effective because they work at this very foundational level.

Rather than targeting a single symptom, they help support regulation. They help support coherence and calm across the entire cerebral system, which is why we're seeing improvements in not just cognitive markers, but quality of life more broadly for people dealing with neurodegenerative conditions.

And, you know, I think we've talked about this, last year, we talk about stress to the point we sometimes forget just how truly damaging it is.

How HoloSync and Brainwave Entrainment Work

And I can't think of any disease or illness that isn't either caused or at least worsened and exacerbated by stress. And so we we kind of get a little too comfortable being stress all the time.

So as a point, we see some really remarkable improvements in people's health. Not because although psych itself cures diseases, but because it's so good at improving resilience to stress.

So when you do that, we get all these correlative improvements in physical health, lowered inflammation, better sleep, better digestion, a lower blood pressure, and more.

So I guess just to kind of finish up the section based on what you asked me. But coherence, cohesion, these are really key words. It's the thing worth underlining because what Alzheimer's ultimately does, beneath all the symptoms that are recognizable on the surface, is it severs those lines of communication between regions of the brain that are responsible for everything from memory and speech to digestion and emotional regulation, and beyond.

So it's not just to individual regions or damage, it's that they stop working together, the way they're supposed to. So brain coherence is key to a healthy brain, as we say around here at Center Point, a healthy brain.

Brain means a healthy life. For sure. So take us into this. The mechanism you mentioned whole is saying like, what

is it doing? What can you go further into like what's actually happening.

Yeah, I'd be happy to you. I mean, in the simplest of terms, it just means that the brain tends to synchronize with repeated sensory input. We talked about that kind of bio entrainment effect where babies will move to bits.

I mean, the brain can can work the same way. If you present rhythmic sound patterns at certain speeds, certain frequencies, the brain begins to mirror those rhythms in its electrical activity.

So we're not forcing the brain to do something unnatural, right? We're simply giving it a stable rhythm that it can align with, which supports relaxation, focus, and regulation.

So I can give you a quick example. We know the brain operates neuro electrically. Every second you're alive, your brain is firing off these tiny micro electrical signals called action potentials.

And the rate or frequency at which these signals are firing can tell us a lot about what that brain is doing at any given moment. So, for example, if we see brainwave activity happening at, say like 3 or 4Hz or 3 or 4 cycles per second, excuse me, we can deduce that that person is in a very deep state of sleep, maybe trance like meditation.

And that would be a delta brainwave pattern. Now, if we see faster oscillations like our brains are probably making right now, as were chatting, say, around 12 or 13Hz, were awake, were aware of our surroundings, and that would be a beta pattern.

So you can use sound in the form of biannual beat and tremor to actually cause these oscillations in the brain to fall into lockstep with the audio stimulus, which means we can effectively put the brain in virtually any state of consciousness.

We can gently change those brainwave patterns, and with those changes come a wide range of changes. So things like respiration and blood pressure, immune response.

So this is kind of the basic mechanism by which we can help people get better sleep, reduce stress, reduce cortisol levels, even reduce some forms of inflammation.

As I mentioned, and most relevant to our talk today, I think increased cohesion and connectivity in the brain at risk for struggling with dementia. what what would a sort of, an episode look like for someone who thought, okay, this sounds like something that could help me, like, what are you committing to when you commit to using sound to support your future health, reduce stress?

What does that look like? Well, I mean, for us, it's really kind of meditation serves as sort of the the basis for it. And because it's simply it's a passive experience, you don't have to do anything, in fact, unless you do when you work with this technology as a user, the better.

So, you know, people often think, well, I've got to think certain things in meditations too hard. We try to kind of demystify all that and make it as simple as possible, because the technology itself does so much of that work for you.

If you kind of get out of the way of the process. So most people who are using holo sync have a daily practice of some kind. I mean, we have hundreds and different, you know, holo sync soundtracks available to people.

But I would say that people who are interested in holo syncs, you know, brain health, properties and its ability to protect the brain and, increase that cohesion, that coherence and that resilience and plasticity.

These people are probably listening to to 30 to 45 minutes of holo sync a day, on average, give or take, and are simply sitting down and putting their headphones on and closing their eyes, as you might do if you were to meditate.

And so you just simply listen. And over time, the brain gets better and better at responding to the signals that are on the soundtracks. And pretty soon people notice that they're releasing old, unresolved mental and emotional stuff.

Their stress levels have gone down, their minds are clearer, their memories, and a lot of other benefits that go along with that. To that's really cool.

And so, you know what? Some of the like the next steps, like what? How do people engage with that? Well, do you want to get to the I don't know, we have or do you want to talk about, what have we got for us?

Oh well yeah, let's talk about that. So I'm really excited about this. This is a gift we want to offer everybody who's on the call today. It's a very unique hello sync powers soundtrack.

It's called Gamma Brain Refresher. And, you know, we've talked about gamma. We could talk more about gamma, if you'd like. There's so much going on with it, but it's being tested and studied to help with that resilience and plasticity and coherence that we keep talking about.

Daily Practice and the Gamma Brain Refresher Gift

And I just like to say, you know, Centrepoint was one of the first to produce gamma brainwave entrainment soundtracks, almost over 20 years ago, actually.

And so this one is gamma Brain Refresher. This is a newer one. It's really the result of years of work. It uses hollow seek to and train the brain precisely into the same gamma range that is being studied at MIT in the human clinical studies are happening right now.

So it's just 20 minutes long. And while you can listen to any time you want, I encourage you to listen daily, kind of like what we talked about. So, you know, James, I like to think of this as sort of like a protective sonic multivitamin, you know, for your brain.

And not only that, but we've included a special sort of phonics affirmation script. I won't get too far afield here, but auto phonics is our proprietary way of encoding verbiage so that it is essentially invisible to your conscious perception.

But does anchor on an unconscious level and manifest in conscious thought behavior over time. So this is to support healthy self-talk for a high performance rate.

So I think people kind of love it. And if you want I can give the link out right now. I'm sure they will find it elsewhere on the page. But if you want to check out Gamma Brain Refresher for free, just go to my holo sitcom forward slash Doctor Talks gift.

Now, I probably should spell that out. My hello. So it's m h o l o s y nc.com forward slash Dr. Tao chs gift my hollows Inc.com doctor talks gift and just visit that link.

Download it. You can play it on your phone, your laptop, whatever this is some of you can do as a gift for your brain's health. Even if you don't struggle with memory or Alzheimer's, right now's the time where they say, James, you know an ounce of prevention is worth a pound of cure, right?

Well, this is your ounce of prevention. No drugs, no procedures. You don't have to worry if your insurance covers it. So that's what we have to share with everybody today.

That's really cool. Now can someone use that without having any of the rest of the gear? They can just listen to it like they would do that amp. That's correct.

All you need is pair of earbuds or headphones and a device to play it on. This is high bitrate MP3. So it sounds

great. And, yeah, no special gear needed.

Okay, great. Well, I'm going to try that out because I'm really interested in this, this area. And I feel like as we move towards a foundational understanding that brain issues and actually all chronic illness is network insufficiency, there's lots of different ways to improve networks, but ultimately it seems like the sort of further you go down the energetic spectrum towards sound and vibration, the sooner and the quicker that it can have an effect, because you're not relying on like the digestive tract to, you know, take out the nutrients that you're eating to improve, like the physical manifestations of the networks.

You know, it can happen happen a lot more quickly. So I'm yeah, I'm into it personally. I'm actually writing a book right now called The Great Reconnection about what Alzheimer's teaches us, about what's wrong with everything in society and what we can learn from it.

And it's really about the fact that this network insufficiency is happening. And and it's the same issue, it's the same pattern across all of these different areas.

And, it's it's really exciting to see that the world is sort of coming around to these ideas. Yeah, 100%. And the book sounds fascinating. I can't wait to read that. Yeah.

I mean, for our, you know, in our experience, I think to, I mean, we live and breathe sound around here, right? I mean, we build neural audio technologies.

What we do is what I've been doing for, you know, 30 years. And it's just never ceases to amaze me the power that sound can have. And I, you know, we we help people overcome, you know, trauma and emotional wounding and people who want to overcome procrastination or break bad habits and things like that.

But I really think that this role of sound in helping people with neurodegenerative problems are just keeping their mind sharp. You know, physically, if we start to get out of shape or we, you know, we hurt ourselves.

I mean, it's very obvious, right? We can look in the mirror, we can see it, but you can't really look in the mirror and see your brain. Right. And so we forget sometimes that our brain needs the same kind of training and conditioning that our bodies do.

And so that's where sound, I think, for me, is really powerful. And like you said, you know, it's not dependent on something else. I mean, I think probably, you know, if, if, if you have a healthy diet that's going to help if you exercise, that's going to help.

But don't neglect, you know, the ability of the brain to respond to the effects of sound conditioning, sound training, what we sometimes call neural driving.

Because when you push that brain to grow and change and adapt, it's going to become stronger. It's going to become resilient. It doesn't really have a choice.

That's just, you know, that's how systems like, the brain work, just like your body. If you go to the gym, work out, you don't have to love it.

Latest Gamma Research and Closing Remarks

But if you do it consistently, you'll get to results one way or another. Yeah, I see that. Well, this is really cool. And I guess before we go, you know, I know you did mention that there's some, you know, an innovative new research happening on the gamma stuff.

And I'd love for you just to test me to double in to that, because ultimately, you know, it's cool to see how, you know, in between these sessions that we do, there's a lot of work happening on so many different areas, and I'd love to make sure that our communities up to date, for sure.

For gamma research in particular. I mean, it all started with, you know, the the MIT studies, but it's expanded since then. I think last time you and I talked, I think that was the only study, and they were just trying to get approval to do human studies.

But there's some other stuff going on, too. There is still primate research going on in January of this year, Kumi Institute of Zoology and Chinese Academy of Sciences showed for the first time in non-human primates that sound stimulation at that 40Hz can significantly increase certain levels of of healthy enzymes in cerebral spinal fluid.

The largest human trial to date is is called the Hope study hope. And I'm still looking into this. I'm not an expert on all the research for sure, but I keep trying.

Keep up with it. But this is the largest human trial to date, and that's going on now. It's enrolled about almost 700 participants between 50 and 90 years old.

They're expecting the results coming up this year, actually, August 2026. And so if the results are favorable, then they say that a regulatory submission is expected by the end of this year.

So that's fast tracking when it comes to research. Right? A potentially putting approval for some form of treatment or another involving gamma wave stimulation by mid 2027. Wow.

Well that's really interesting. Well keep up to date with that. And Marcus, don't I thank you for your leadership in this space. And, thanks for coming to share some of these updates.

I know that the people who are listening to this summit are really interested in understanding what's going on with the brain and what we can do about it.

And, it's giving us a lot of hope and, excited to keep following the work. So check out the MP3 download on the Mark chat earlier. I'm going to get it and start listening to it right now and be able to give some feedback next time we speak.

And, thanks everyone for coming in to be part of the Alzheimer's Summit. You know, we got so much great content this week. You know, at all levels, networks fall apart and become insufficient.

And it's about building those networks back. And over this summit, you will hear all the different ways in which that's happening at a physiological level, a different systems in the body.

And then also, you know, for Mark and others looking at, these different deeper layers that might hold the key to more rapid improvement. So Mark, thanks so much for being part of this summit and everyone who's watching.

Thank you so much for tuning in. And we'll see you at the next session.