



**THE SPECTRUM
OF HEALTH**
— P O D C A S T —

Podcast Session #39

Treating Brain Disorders with Sound

With Carol Garner-Houston

Dr. Schaffner speaks with Carol Garner-Houston, the co-founder and Chief Clinical Officer of Brain Harmony – a company that uses the neuroplasticity of the brain to provide the most powerful and proven therapy to help children and adults with learning and performance difficulties.

For more information visit: <https://www.brainharmony.com/>

00:06 Dr. Christine Schaffner: Welcome to the Spectrum of Health podcast. I'm Dr. Christine Schaffner, and today I'm speaking with Carol Garner-Houston. We're going to be talking about how to be a rockstar mom that heals brain disorders with sound. Carol Garner-Houston is the co-founder and Chief Medical Officer of Brain Harmony, specializing in treating neurological disorders without pharmaceuticals. In their groundbreaking telemedicine program, Brain Harmony applies the principles of neuroplasticity. I'm really excited for you all to listen to my podcast today with Carol. She is such a wonderful model in how she's helping so many people heal their brains, and I hope you learn a lot. So, enjoy the podcast. Welcome Carol, I'm really looking forward to having you on the podcast today.

00:52 Carol Garner-Houston: Me as well. Thank you for having me.

00:54 DS: Well, Carol, we'll just dive in. We were connected through a mutual friend, and my friend was sharing the results that he was seeing with his son as a result of working with your company Brain Harmony, and was also sharing the work that you do, specializing in neurological disorders and the field of neuroplasticity, and how to coach and teach families to recover brain health. It's a really exciting area of research, and I know that we're learning more and more. When I was in medical school, these ideas about neuroplasticity were still in their infancy...so it's exciting to just see where we're going and where we've come from, and I'm really excited to have this conversation.

01:37 CG: Wonderful. Yes, neuroplasticity is the basis of all of our therapies, and the idea is definitely evolving, but essentially, it is that the brain will change based upon the type of input that it's given. So, we give the brain the most organizing and most powerful input that we know of in the world. We

can make amazing changes to the brain and the central nervous system, which are at the root cause of so many of our neurological disorders, and many of the diagnoses, such as trauma, depression, anxiety. But those can also be connected with all kinds of other diagnoses that we help as well, definitely with children, such as learning disabilities, attention, regulation. We deal a lot with adults with post-traumatic stress. And because of the neuroplasticity of the brain, the brain knows no age and no diagnoses. So yes, we started with children, but now our oldest client is 98 years old, recovering from a stroke, and we are just moving forward and building skills and opportunities every day.

02:56 DS: I love it. How did you get into this work, Carol? How did you get launched into this world of neuroplasticity?

03:04 CG: Well, I'm an occupational therapist by trade, and I've been one for 23 years. I worked in the conventional medical model making changes to the brain through exercise and manual therapies. Yes, it was wonderful and amazing, but it did take a very long time. And essentially in rehabilitation, once you reach maximum medical improvement, maybe after several weeks following an insult, essentially, you're dealt with compensatory strategies, and you just have to deal with it. There's not much more growth or much more recovery after that. But it wasn't until both of my children were hospitalized with the onset of some autoimmune-based disorders that we were really thrown into the conventional medical model, and we experienced a significant amount of trauma, as you know, with just the onset of chronic illnesses, especially for your children. We went into that very dark space, and we tried to manage it for years with what we were originally given.

04:18 CG: But then we just knew there had to be another way, there had to be different perspectives and different ways that we could look at for supporting the system and healing as a whole. While trying to manage that, you also have to work and you have to educate your children, and it was essentially when I was trying to figure out, how do I educate, how do I educate my 2-year-old boy who's an insulin-dependent type 1 diabetic, because you just can't drop him off at school. That isn't something that you can really do. So, how do I get him an education, but still support his metabolic needs? So, I offered to volunteer at the little Montessori School where he was going to attend, and that way I could support the other children with my OT background and I could support him and the teachers with anything that they may need for his blood sugar levels. What I found was that there were so many children in this beautiful school with various ranges of neurological disorganization, that was not allowing them to grow sequentially or as expected.

05:29 CG: And then, of course, with the onset of all kinds of different developmental delays that are unique to this generation, the impact was intense. In a school classroom, I could see multiple children. Maybe there were several high energy children who could not stop moving even if you try to convince them or let them run on the playground, their regulation level was just astronomical. Then you would have another child to one side who couldn't read, they couldn't get their eyes to stay on the page, they couldn't phonetically decode. We had another child who couldn't write. So, as I'm looking around at all of these levels of suffering, as I myself was managing the chronic conditions of our family and our children with my husband, essentially what came from that was, I was going to find the most powerful tools in the world to make the most positive change for my family and for the community surrounding us. And now from that it has just grown significantly. I took some

courses. I was offered a continuing education course to keep my OT certification up, so I read about integrated listening systems, and I said, "Why not?" And it was at that beginning training that I knew I needed to have and use all the tools that they had. I couldn't wait to embrace it. I put the headphones on my first client and within our 60-minute session, he was a different child from beginning of the session, to the end of the session. And when I took the headphones off, I'm looking at the other therapists, and as this child turns around, looks me in the eyes and waves goodbye to me, we're all looking at each other going, "Did you see to that change, did you see he was much more calm? Did you see the eye contact?" I mean, we were just buzzing with, "Hey, I felt like I saw something move." So of course with the next child, we said "Here you go, headphones for you." And that's how it went, and the changes happened. And we actually have some fantastic case studies, one is maybe the shortest case study ever, it's a four-minute case study. We took the writing sample of a precious child who was originally referred to us for handwriting, but of course has some visual perceptual issues and regulatory issues, and attention directly linked to poor oculomotor control.

08:01 CG: So, this precious little thing, I had him write a sentence and he's just sitting there with himself and a piece of paper and a pencil, and then we put the focus system on his head and within four minutes of the sound frequencies and the bone conduction that is delivered to the brain and the central nervous system, his legibility improved to where you could read it, as well as with some capitalization and a period, when before it was mainly very scratchy and criss-cross-y, and it was very not legible. And so, with a short little four-minute case study, it's just so powerful to see what kind of organization you can bring to the central nervous system and then what skills are al-

lowed to be expressed that seem effortless at that point. So, Integrated Listening Systems taught me about neuroplasticity, specifically Dr. Ron Minson and his wife, Kate. They have been instrumental and so joyful in embracing clinicians and teaching them all about their studies and the use of sound frequencies to impact the brain in a very specific manner to obtain very specific outcomes, all while speaking to the autonomic nervous system, specifically the parasympathetic nervous system that you can reach with different kinds of sound waves and different kinds of input.

09:38 CG: From there, that's where that I originally began using this tool to the maximum that I knew with every single person that I saw. Dr. Stephen Porges, who is the creator of the Polyvagal Theory, has created a protocol, a five-day safe and sound listening protocol. He joined integrated listening systems, and then they taught me how to look at evolution of the human system, how it's connected with the social engagement, how all of these are wrapped within and are connected to the parasympathetic nervous system, how to really start there at the base by calming the autonomic nervous system with the use of the vagus nerve and sound frequencies. So now, we gained an even deeper level of neuroplasticity with this additional tool. And with those two tools I really was beginning to change drastically the trajectory of development from children to adults.

11:01 CG: With that same mindset, I'm always looking to bring in new modalities that may be of assistance to anyone with chronic illness, anyone like myself and my husband who are managing such overwhelming circumstances. We've looked into other neuroplastic tools, such as the Alpha-Stim, and that is approved by the FDA, and produces alpha waves in the brain with these little ear clips. This is so instrumental in providing that essential comfort for that

essential situational distress that you're just unable to talk yourself out of, you're unable to will yourself through. With tools like these we reset the autonomic nervous system and we can build further skills on top of them.

12:00 DS: What a journey you've been on, and it just seems like you've been led to these amazing people at the right time. It's just amazing that you were able to see, not only through your son's personal journey, how you could help the other children. I just love how you have the silver lining in this, I'm sure, very difficult circumstance. You've touched on so much information that is so exciting for me to learn about. At Sophia Health Institute, we are familiar with Dr. Porges's work and we have the safe and sound protocol. We're still in the infancy of implementing it. There are a couple of topics that I really want to cover in order to set the stage so people can understand. There's this increase in neuro-developmental disorders in children and then we also have this whole host of neurological conditions in adults, and there's lots of ways to look at what's going on with the brain and with the body. You mentioned a few times that there's this disorganized energy. And so, these modalities are helping to create order and coherence and organization so the brain can communicate more effectively. Can you tell us a little bit about what you mean by this kind of disorganized energy, and then how these modalities of sound and neuro-feedback techniques, how they create change, and what are they actually doing to the brain?

13:34 CG: Yes, any time I go to intervene in the rehabilitation of a human system, regardless of age or diagnoses, the first place that we always go is to comfort the human system and provide safety. So we feed the neurological system acoustic stimulation, specifically that can calm the heart rate, breathing, and sensory systems. The Safe and Sound protocol is so beautiful in its

delivery and how it is received, and then of course, to watch the outcomes as it grows and is expressed in each individual differently is amazing. So, I'll start with the Safe and Sound protocol. Essentially it is a five-day listening protocol and you listen for one hour a day, five days in a row, and when the individual is listening to the music, it has music with words in it on purpose, that's to help train the inner ear to process human speech better, as well as allows for the prosodic features in the music to pass through the tympanic membrane to reach the vagus nerve. With the vagus nerve, it's like a reset calming type of intervention that first calms from a neuroception perspective. The vagus nerve has very multiple different connections throughout the body.

15:27 CG: That's what's so beautiful about it, it is so interconnected with not only vagus regulation that we understand as your heart rate and your breathing, but it also goes to the organs for elimination, as well as connecting to the muscles of the face for facial expressions, as well as the inner ear for the vestibular and cochlear apparatus. So, the vagus is this wonderful connection that allows for the individual to respond to danger with a fight or flight response, but then can also be suppressed, which will allow for a different part of the vagus to allow for the social portal of human engagement to be expressed. And this is done with sound frequencies and with exercising the muscles of the inner ear in a very specific way to allow for the prosodic features that anatomically we are built to receive and be soothed by them. For whatever reason, either for some friends, that's just never been activated, or it's never really been awakened yet, or that connection is not there or they've had developmental trauma or they've had trauma in general, that may have interrupted that very good connection and that very good regulation.

17:05 CG: So we go in first with all that we do and we provide that comfort and safety with the use of the Safe and Sound protocol. It's fascinating science. Dr. Porges has fantastic books, and it's a beautiful read. I'm right now working through the pocket guide to the polyvagal theory, but this one doesn't fit in my pocket, it'll fit into my briefcase. So, it's very dense, but it is a very fascinating understanding of evolution, the polyvagal theory and how we can reach trauma and depression and anxiety outside of the pharmaceutical interventions and outside of cognitive therapy, where essentially you're trying to work through the event itself. Instead, Dr. Porges has taught us through the use of this tool that we are instead treating the physiological response of the parasympathetic nervous system. That's what's so beautiful, the gift that you're giving to any one of our friends is the neuroception of safety.

18:19 CG: Once that happens, it is also a very activating protocol, because when you're calm, then it allows for the brain and the central nervous system to reach out to others and to communicate, and to have those social bonds and connections. As mammals, we are intended to be social creatures to survive. So, communication and depending upon each other, physical touch, all of these things are very important...we are anatomically built to be that way. And so many of us are struggling with just in congruences in that area, or for some their sensory processing is just so dysregulated, that every day is like trauma to them, because their sensory systems are so dysregulated. And so, once we calm the system, it allows for this activation of the social portal of the human system and that is when we get the responses from the caregivers like, "My goodness, I saw that my child was not just giving you eye contact"...because that's just if somebody's looking at you and their eyes connect with yours...they're talking about deeper levels of communication with their

non-verbal communication. Communicating without words, but through the use of their eyes.

19:50 CG: Or that, "Oh, my husband, following a stroke, this is his first step in the rehabilitation process, he wanted to hold my hand again, which before, he was just a bit shut off and a bit muted, and now he reached out to hold my hand on a walk and now he can process better. When his granddaughter calls him on the Skype call, he can process what she's saying better and give her not only a verbal response, but also when on video, he can give her the non-verbal cues of safety, that keep that bonding and connecting going." So, it is absolutely beautiful. One of the joys of my job is to listen to the caregivers express the changes that a five-day listening protocol can do for a system.

20:44 DS: Yes, I bet it must be quite rewarding to hear some of these clients who probably have not been given much opportunity or options within the conventional system. You're working to see people really come to life. You did a great job with explaining Dr. Porges' work, it's quite complex. He has wonderful books on Polyvagal Theory. I read about it, I listen about it, and I still am trying to integrate it into my understanding of the complexity of the vagus nerve. But I think that this key to safety and also basically releasing trauma, and reconnecting, are what you're sharing. It makes so much sense in the way that you're describing it. I just want people to also understand, with your company you work with people over the phone and you help support them through these modalities and rotate them and help them integrate them in their home environment, so they're able to heal and recover in their home. And am I getting that correctly?

22:11 CG: Yes, absolutely. Once we found the tools and these protocols that were making such amazing life changes, we had to find a way to give more people access to it. So, in the typical OT mind, I thought I had to save the world, so I'm saving the world by opening up more brick and mortars. I needed more clinics, and so, I thought, I'll just have a clinic in every city. And of course, we went off on that journey and we started opening up clinics, but we found ourselves almost overwhelmed with the logistics of that, and it really wasn't bridging the gap of serving more people. So that's when we looked into the telemedicine platform, and to our knowledge, we are the first OT telemedicine company that services all 50 states nationwide. And this way, someone could call from another state and we can ship the modalities to your home. We schedule a phone call or a video conference. I help you open the box, I teach you how to put it together, I teach you how to use it. I teach the caregivers, and I teach the therapists who are working in my clinic to provide the same therapy to the children or adults.

23:31 CG: There are so many of us who can't even leave the home. My husband and I spent easily four years doing 24-hour medical care, because it wasn't only for my son, we had two children under the age of five requiring 24 hour medical care. So that type of experience really does put you on a trajectory to find the best tools and the best ways to help with a perspective of just growth and no ceiling whatsoever.

24:12 DS: I love that, and with the work that I do and the mission that I have, we see people from all over the country and even out of the country, who travel to come see us. We also want to support people in more communities. I think this is just brilliant on your part. It's a great time, probably too, in that

there are these technologies that you can ship, it's affordable to have in people's homes. I think that's brilliant on your part Carol. So kudos to you. We talked about the Integrated Listening System, and then you mentioned the Alpha-Stim, this whole idea of brain waves and how looking at the brain waves and creating more regulation with brain waves, especially the alpha waves, can help with recovery from trauma and depression and anxiety. Can you share a little bit more about that?

25:12 CG: Yes, so the Alpha-Stim is a beautiful tool that I wish I would have had during those very difficult times when we couldn't leave the house, because you can just take these little ear clips and they have some conduction fluid, they clip on your ears, you're in control of the settings, so you can set it higher or lower. We teach you how to use the different settings for the outcome that you're looking for. It uses this very periodic but slow DC current and a patented wave form that you don't build a resistance to. Meaning that it's not like you'll use this for a while, and then it stops having its efficacy, it's not true. Actually, it continues every time, and with my use of it now, after six years, it is a neuroplastic tool as well, meaning it is training the brain to produce its own alpha waves, right? So the alpha waves are the ones that combat anxiety, insomnia, and depression. With chronic illnesses, dear goodness, who doesn't tap into any of those, and who couldn't use some situational relief without a pharmaceutical?

26:33 CG: So with the alpha waves, it's just so easy to use, and the ear clips allow for the current to travel all over the brain. It can decrease the amount of pain that a person is experiencing by increasing endorphins. Serotonin pathways are activated and you get reduced cortical activation so that when a hy-

per-brain is spinning with ideas you really can slow it down, but it's in a natural way that is a good fit for your brain and your body because it's your own alpha waves. Essentially it trains your brain to recognize, "Hey, wait a minute. I know these brain waves. I can produce them myself." Many of us with the trauma and all the circumstances, you just get so overwhelmed that the brain gets disorganized due to the chronic situation that you're in. So a tool like this is beautiful, and so powerful. We have some precious friends that we've been working with and unfortunately, her youngest child passed away, and they invited me to the funeral and of course I went.

27:55 CG: And one of the first things they said to me when I came into the church was, "Thank you so much for coming and thank you for giving me the Alpha-Stim. It is really helping us." I just looked at them and I was so humbled by the power of this gift that it was helping them through the most difficult time, maybe ever, for them. And that's the power of it. It's used during the day when you're awake, but then, for me, my brain is like a car and it will go 100 miles an hour...my regulatory system is much better after using all of our products, but sometimes I have a difficulty shutting it off. So at night time, I just put the ear clips on and I knock the dials a little bit higher than it would be during the day, and the timer starts going backwards, and I drift into sleep, I wake up with a much better rest, a restorative sleep, and I maybe still have the ear clips on but the Alpha-Stim unit's off and I take it off, and I go off in my day usually starting with some humming or singing, because my brain was just resting and softened and was healing, and it really can be a gift especially when struggling with chronic illnesses.

29:28 DS: And sleep is so important for the health of the brain as we know, for the lymphatic system, and our brain really needs that time to repair and restore and to self-clean, and so I think that's so important. That's a great therapy, and I've heard of the Alpha-Stim over the years, but it's not anything I have dived into, so I'm really, really excited to dive into that more. So many of my patients have anxiety and it's multifactorial but they need non-pharmaceutical tools to get through their anxiety. Carol, you have a few more tools that you use to work with people. What are some other tools and therapeutics that you have people do as part of your program?

30:14 CG: So, zone one is what we call the sensory motor zone. It has sound frequencies between 0 and 750 Hz, that's where we build that brain-body connection. It improves balance, rhythm, coordination, body awareness, sense of direction and you'll see an improvement in behavior and emotional regulation as well just by providing these lower frequencies. The way that it is delivered is very organizing to the central nervous system and provides a beautiful base from which we can build other higher cognitive skills on top of it such as in zone two, which is between 750 and 3000 Hz, that's where the speech and language bandwidths are. And that's where phonetic decoding is. This is the folder that is changing IQ points, not measured by myself, but measured by independent third parties that give us the before and after scores. That is in that folder that children are gaining years worth of the language, arts, and math skills. I do not teach language arts and I do not teach math. What we do is we organize the brain so it has the highway paths of efficiency between the areas of the brain that allow for that information to be received, stored to where it needs to be, and then retrieved for either written, verbal or non-verbal output.

31:46 CG: It's fascinating what you can build with the use of sound frequencies. Then we can move into zone three which is even higher, and in that zone is where mental energy, motivation, enthusiasm, creativity, executive functioning, memory, concentration, and attention are. That is just this beautiful higher cognitive organization that not everybody is able to reach or has even thought they've been capable of because usually... You've either been dealt genetics or your circumstances, and that's just the way you either got lucky or not, and you got some academics and some athletic ability and maybe got super lucky and you also had social skills, wow, you've a trifecta. And you were either lucky or not...and those of us who weren't, you were just given compensatory strategies or tutors or ways to compensate for the lack of it. But nowadays what we do is we identify where the areas of deficit are and then we build connections where there aren't any or where there are inefficient ones, and then we just watch how their system organizes.

33:05 CG: For that person the real character and personalities begin to bubble to the surface once you can organize and soothe the system, and we use sound frequencies, and it's just very exciting to be working in this space right now.

33:24 DS: Absolutely. I have some more questions of course, but I don't want to miss any technologies that we haven't covered. Is there anything else that you use in your treatment approach or in that box of therapeutics that you send to people when they work with you?

33:41 CG: Technology-wise, we also have the Dreampad that uses the same technology with the sound frequencies and bone conduction, but that is set specifically for the parasympathetic nervous system. It's quite luxurious really,

that now we're able to say, "Oh, well, we're just going to address the para-sympathetic with this kind of frequency." It's just exciting that we can be this specific, and that's a beautiful tool as well. But another very important piece is that it's definitely not just modalities, it is the protocols as well and how we care for the clients and how we use a bottom-up approach in the rehabilitation of the human system. Essentially we do a lot of work with reflex integration. I've had training with Svetlana Masgutova, and we teach the parents and we help to connect, how to identify whether or not an individual still has these very primitive, restrictive reflex patterns that are affecting not only physical development, but as well as social and emotional development as well. So we can assess it, it's like the cliff notes to a neurological snapshot that we would get as an extensive full evaluation in the clinic.

35:04 CG: We can't do exactly all of that in the telemedicine platform, so we took the cliff notes and we prioritize some very typical neurological tags that we can test for and then customize not only their listening program, but then their neural exercises so we can further accelerate development and healing.

35:29 DS: That's fascinating, and this is the idea that we have these primitive reflexes that come and then they should disappear as we go through different developmental phases, and for some people they still retain those primitive reflexes, and then that can give you an area or window into where to treat. Is that correct?

35:50 CG: Yes, yes. Very well said, absolutely. And the trend for whatever reason, I think that might be another podcast, the correlation of the trends of why we still have these retained reflexes. Back when I was in school, they taught us about retained reflexes in development, and then pretty much they

just explained, "Well, they get integrated into the central nervous system, you really won't see them again unless you're in a motor vehicle accident and you have a stroke and then you can understand how deep into the brain the insult went, based upon different reflexes that were re-expressed." But they didn't tell anyone, nobody was really taught about what happens if they never integrate in the first place. So, what reflex integration is, is a cornerstone of what we do because so much of development is dependent upon the integration of them. And you're right, they are expressed in a certain order, they're integrated in a certain order, they build off of each other, they release in a way to allow for further development in other areas.

36:58 CG: We do see a correlation with lots of friends, that if you're born via cesarean section, I just go ahead and start rolling you into our reflex integration exercises because there's some research about if the individual is not allowed to fight through the birth canal and go through that process, that if you remove that, it doesn't send the signal to the central nervous system that, "Hey, I'm being born", and then these next pieces should happen next. So instead, they're just born, they're taken from the body and there's nothing that told the system to start integrating them. So, it's okay. We identify them, we put our friends through a series of exercises and then we start integrating them. And so, you do reflex integration work with the use of these modalities as an accelerant and we're off to the races. It's just, "Hey, how are you feeling today, and tell me what's going on for you now?" And it's the joy of these stories, that every day, for example, so many of our friends have been with us, the end of their school year was tough, and so then they come to us in the summer and they've been doing their heavy lifting with their equipment and they've been doing their exercises and now we're getting results, everybody's returning to school.

38:25 CG: And the comments that are coming from the caregivers are, "I'm incredibly surprised. My child is tolerating well. He or she didn't cry on the way to school, or they weren't totally exhausted when they got home from school. I didn't get a phone call from the teacher," all of these different things. And as well, the caregivers. So sometimes, the person who is struggling is the catalyst that brings all of us together, brings the tools into their home, and we start caring for the individual who has the most issues, but of course, we start caring for the caregivers that support this person because they've been carrying the neurological deficits of their family members and the trauma is as much in their body and in their system as it is in their child's or their family members. And so, if we have the most powerful tools and protocols in the world, why not use them? And so that has been an even larger gift--that not only are we helping the individual, but we help the entire family begin to feel better and function better, and then they all move together into this next chapter which is full of goal-achievement and excitement, and achieving things that they had not thought ever possible.

39:46 DS: It's just so magical, isn't it, to be sitting with the perspective that you are able to see people get their brains back and see what that does to their whole family. So, I have some curiosity. I see a lot of patients with all sorts of different things. We do see a lot of patients who've had a history of a head injury or traumatic brain injury, have you felt like the approaches that you use have been successful for recovery with people who have gone through a traumatic brain injury?

40:25 CG: Yes, it's one of my favorite things to do.

40:28 CG: Post-concussive syndrome, as well as traumatic brain injury, that's a very clear example of a disorganized brain. Some will call it a broken brain, but the brain, if you could leave it that way, yes, it stays broken and disconnected. You stay in that state of dysfunction. If you're not doing anything to change it, you're just going to stay in the cyclical pattern. And to me, it's an opportunity to go in and you start providing this input. The brain will build connections around the dead matter, around the insult in the brain.

41:07 CG: And then what's restored is function. That is something that definitely in rehabilitation is just unspoken...they don't really talk about it as the future growth on the level that we are seeing. Post-concussive syndrome, we are super good with that one. With traumatic brain injuries, they take care of you and they set you up, but then, there are these mood issues and there's all these other strange levels of disassociation from the body and from the system, that happen that can be seen right away, which would make sense, right after the trauma. But years later, especially with the post-concussive syndromes, we're getting lots of teenagers and young moms to whom these things have happened, whether it was in sports, or in motor vehicle accidents, and they just were having such a hard time functioning.

42:08 CG: It was impacting, whether it was their reading or memory, the regulatory state, all of those things, their vagal nerve. We go right in, we calm it with the vagus nerve system, then we re-activate the social portal of the human system, then we layer in sound frequencies to rebuild the connections in the brain, and their life is what comes back. On our website, www.brainharmony.com, we have video testimonies, we have quotes from physicians with traumatic brain injury who use these tools to rehabilitate themselves. And it's just a wonderful time to be alive with the advancements of technology and for

the work that you do as well. Our friends that make the most recovery or the highest gains do this when they combine the work that I do with the re-organization of the brain, with the functional biomedical approach that you are doing.

43:07 CG: I think that, together, this is in such a great opportunity for so many that are suffering and feel like they don't have a lot of answers, or feel like there's not a lot of hope and they are without many choices. It's just not the space to stay in. Share our information with your friends and family that are suffering because it hurts my feelings, you know, that people don't have access to us. And everyone is so grateful and say gosh, I wish I would have found you 10 years ago. It's just wonderful that you've invited us here to share this perspective with viewers.

43:49 DS: Absolutely, and I think it's that integration that is key. We have a lot of pieces to the puzzle and then it's combining these technologies and these therapeutics with the biochemical and the physical things and alleviating the stressors...I think that that's the perfect synergy. I'm thinking about a bunch of my patients, actually, as we have this conversation. There's this increase these days in children, even in young adolescents too, in PANDAS or PANS-- this kind of inflammation that happens in their brain, either post strep infection or after other infections. Have you worked a lot with PANS or PANDAS, or these neurological tics that can develop as well, as a result?

44:45 CG: Yes. Yes, unfortunately, we are seeing a rise in that as well. We service friends across the country. We have our finger on the pulse of what's happening to the younger generation. And we are seeing lots of motor tics, we're seeing lots of the PAN, we're seeing a lot of that. And so, of course,

we've treated friends with the use of these protocols to improve that, as well as some that have the staring spells that they might think are potentially seizures that involve just staring into space that we're seeing a lot of as well.

45:26 CG: They come to these programs, and we will expose the brain and the neurological system with these tools as I've explained. For some, it was the way that we organized the system that resolves the majority of their tics. So, that does happen but, it also will help with the brain just being able to manage it with this dysregulation, or maybe it's viral based, right? So I can't change the processing of that. That's going to be something more that you could help with. But, I can change the system all around it to help it be more resilient in managing this dysregulation that's been introduced to the body. That is a part, and you can understand why something with the vagus nerve that is calming, that can be calming to the system, can be helpful when you're trying to weed your way through some of these unusual types, well, it's not unusual anymore, but these types of concerns with the tics and the PANDAS and things of that nature.

46:36 DS: I think there's a lot of potential with combining what you're doing with what we're doing in a more integrated approach, and that's the integrated medicine that I'd like to see. I'm really excited to learn for you today, Carol. You've probably piqued a lot of people's curiosity who are listening today. How can people find out more about your work and your company, and how do people learn about working with you?

47:06 CG: Absolutely. Brainharmony.com. Our mutual friend that has connected us has also just beautifully laid out and made our services so much

more accessible to others. So our website is beautiful, it's an expression of art.

47:22 DS: It really is, yes.

47:23 CG: Isn't it?

47:23 DS: Yes, he did a great job.

47:25 CG: Amazing. And it really does allow for the joy of what we experience to be yours as well, and it shows these stories and walks you through. The best way to get in touch with us is to schedule a consultation with us. You can do it online, you just press the "Consultation" link when you get on to our website. It also has our 888 number if you prefer to speak directly to a human immediately, but when you do press on that scheduling link, you'll get myself or you'll get my business partner, who is also my sister, and a hospital administrator who has really brought this to scale. When she started working with me, I was servicing 30 clients and doing all the accounting, and all the therapy, and all the hiring. It was a lot.

48:16 DS: Yep.

48:17 CG: And then when she came and saw what we were doing and joined us, she really streamlined our processes and made this accessible on a mass scale, so you will get her, we will find out what your major needs are, and then we'll set you up with the tools that you need, and then we'll get you on my schedule, and I'll help you get started.

48:39 DS: Well that's wonderful. I'm just so excited that I got to know you today, Carol. Thank you so much for being on the podcast.

48:52 CG: Oh, thank you! It has been my pleasure, really.

48:56 DS: I hope you enjoyed my conversation today with Carol. Please check out her website, brainharmony.com. She is really doing a unique service to help us heal our brains and she has a wonderful model where she will guide you through the tools and therapeutics that she has found to be effective. And part of why I love Carol's work and having her on the podcast at this time, is that we are getting ready to launch our summit, The Body Electric Summit. It's a conversation about energy, frequency, and vibrational healing. That's going to be live on October 7th-13th. Please check out the link in the show notes, and we're going to be going in deeper into this conversation of how we can use things like sound and vibration and frequencies and energy to really restore our health. So check it out and let me know what you think and thank you so much for your support.