How Neurofeedback and EMDR are changing mental health treatment with Sean Brock Transcript

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Introduction and Guest Background

Hi, everybody. It's Dr. Laura with Connect My Brain. We are so excited to have you join us today. I always love having guests come on to the podcast because, you know, it's great to share information all around the world and to bring that information into our audience.

So today, really excited, we have Sean Brock from Neuro Colorado, that's right. He is out in Colorado and he does neurofeedback and we're gonna have a conversation about thinking about neuro feedback to help individuals and how can it help and who is it ideal for.

So Sean, thank you so much for being on the podcast today. I'm so happy to be here, Dr. Laura. This is, I've really been looking forward to this this week.

Well great, and we're so happy to have you. So go ahead, tell us a little bit about yourself and tell about your practice. Alright, well I am a licensed professional counselor and so I've been a counselor, a therapist for 14 years and have worked at this company the whole time.

All of my jobs. I have been interested in sort of the most effective, most efficient ways to help people feel better, whether that's specific types of psychotherapy, EMDR, internal family systems, some specific techniques like that, as well as neurofeedback and neurostimulation techniques to try and address the brain itself.

We're a sort a small practice here in Denver. There's five of us that work together and we have been treating a wide range of ages of folks. We kind of start at about seven years old and go through end of life and treating everything from complex PTSD to kids with ADHD.

So a really wide-range of things. All of us are counselors here and so we use neurofeedback and neurostimulation for mental health. purposes in particular, even though neurofeedback and neurostimulation can be utilized for more than that, that's what we're licensed to do.

So at our practice, so that what's we focus on. Well, I just love that, that within our own little professions, we can add different tools so that yeah, it offers a wider net for the patient and they're able to see what is like that best fit.

And I know for myself, the, and my practice started off as most chiropractors start, And then I just had this abundance of kids come in and then there was kids that had challenges and it just really expanded my mind to go and look and learn all these different things.

Why Neurofeedback Belongs in Counseling

And the way I got into neurofeedback was back in 2008. I love the primitive reflexes, but it was very difficult to try to explain to a parent what a MoroReflex response would look like.

I got it, but when I said, oh, did you see your kids startle? They would like look at me going, I'm not really sure what you're talking about. And the first system I go was from Thought Technology.

But one of my colleagues, Dr. Barwell, he created this stress response test and Moro activates three things, arousal, CO2O2 in the sympathetic nervous system.

So I'm going, well, this is ideal to quantify is somebody in a chronic stress pattern. And so that was a very first system that I got started on and there was neurofeedback options.

Then I start dabbling in neuro feedback and I am like, Wow, this is really cool. You can make incredible changes and it just seemed to happen faster when you were combining efforts.

I like to think of it as neurological stacking, but when were adding not only what you do with movement and primitive reflexes, you're incorporating the brain and getting that feedback to the individual.

I was like, wow, this is incredible. And then it just set me on a path to go get board certified, get a diplomate in it. and I just love it, but what attracted you to incorporate this into the idea of counseling?

Yeah, I'm glad you asked. So I gonna say like I feel very similar to you in that It's like there has to be more, right? Like what else is there? How can we address not just someone's experience and how they're feeling, but the nervous system itself directly.

And so from my perspective, I was going through, before I wasn't in grad school, was a backpacking guide. I would take groups of teenagers out. We did a lot of, wilderness-based therapy where I was the guide and I'd be out there with therapists.

So I'm observing and participating in some very intense group therapy, worked at a residential treatment facility as well, and again was able to participate in pretty intense longer-term therapy.

Went back to grad school for a counseling degree and while I had the feeling of, is this all there is? Is this the whole field of counseling? And not that it's not wonderful and effective, but I'm like, it has to be able to more effective than this.

And we're missing the brain. We're just talking about the person, assuming that the doesn't exist within a body. And so fortunately, one of my professors also owns a neurofeedback practice and taught a one day seminar and things started to click for me.

I was like, oh, this is the other half. What I feel like is a real focus on the brain and how to directly influence the I was able to get an internship with the co-teacher of that class who also in the neurofeedback practice and then was to able get a job with her after the internship and a couple years later she retired and I purchased her practice.

And that was 12 years ago and so here I am today. But so from the very beginning even in school was we have to be able look at I like to use the word software and hardware, right?

So we have to be able to look at the software, someone's experience of themselves, their thought patterns, how their past is influencing them in the present, all of those things.

But we also have look the brain itself, the hardware and say, The way I believe and the way think and behave, tells my brain how to structure itself, but also the way my is structured in my genetics and developmental processes impact how I feel, how experience myself, and how i think.

So for me it's how do we try to impact and understand both sides of this thing that creates me. That creates a person or what a personal would think of as themselves.

And so yeah, I feel like neurofeedback and neurostimulation in the assessments that we're able to do and understand why somebody might be feeling how they are from an electrical perspective in insight into who they are, why they feel how they, feel and then our options for treatment planning really open up to help them to get from where they to kind of how want to feel.

I just I love it. We do totally resonate on this idea that you know we've all got the same stuff up there.

EMDR, Trauma Processing, and Neurostimulation

But our experience has really impacted how the circuits got wired. And like when I do a brain map, I don't ever want

to take the map and go, okay, this is why you are the way you.

But rather look at the math, what the person is going through. Because the majority of my practice is kids. look at that developmental journey and how did it all influence to where your brain is right now.

I actually had an amazing case this morning that, you know, I don't know what I was expecting when I going to meet the young man, but he was going through like impulsive tendencies and lack of motivation and some procrastination.

And, you know, in my world, most of the time, what I do see is developmental delay. This young man was not developmentally delayed. He was quite sharp.

But as the story unfolded, and this is what i always refer to as The Blueprint, as our time together unfold What I actually realized was that I think there was an injury at birth.

The shape of his head alone was very elongated and I'm looking at this compared to his parents and then I find out the cord was wrapped around the neck as well as they use vacuum extraction.

So everybody knows the baby soft spot, you put, the cranial bones are so pliable at that time, You put a vacuum on it, and you literally cause a stress to the structure.

And if it's not removed, bone grows in the direction of stress. Therefore, that's the position. You could even see how his posture of his body looked more externally rotated and the cranial plates go through flexion and extension, and it's like his whole body was stuck in extension.

And if these things are not changed, there's an impact on that developmental journey. Ultimately, like you were saying, how those brainwaves in the architect gets shaped, it is going to play a part on a certain aspect of the brain and lead to the symptoms of impulsivity and procrastination and motivation because this young man was involved in sports He is, you know, he's well together, but there is something holding him back and I'm excited to see what we can do together in order not only from neurofeedback but even from a chiropractic model, I am going to be able to work on that cranium and make a change.

So how do you match one of your cases when people come in and I would assume, and correct me if I'm wrong, but I assume that most people think when they're gonna go see a counselor, they just gonna talk.

So how do you connect that dot for your patients? It depends on why they are here. Many people do come and specifically for neurofeedback. Oh great. Especially kids.

So before I get into that, I want to just riff a little bit on what you were saying, because I love that you're looking at injury to people that you're looking at what may have happened in birth or physiologically or retained reflexes or different things that are going to change neural development in folks and impact the way the brain orients itself and how neural networks are created.

I also look at injury or things to define how the brains is going orient itself or what neural network is gonna be created But I look at it more from the relational side.

What are the injuries that occurred relationally? What the things that happened in someone's life that are going to impact the way they experience themselves in the world around them?

I think the ACEs study is an amazing example of how adverse childhood experiences create this lifelong impact, even on physical health. So if your listeners don't know about the ACES study, just Google it.

It's amazing to see challenging childhood experience and the correlation with really dramatic adulthood. disease processes that happen. But I look at it more from the mental health and the counseling side and what may be happening for folks.

And as far as connecting counseling clients with this idea of neurofeedback, I think part of it is just explaining to them, you know, some folks come in and it's clearly a counseling case.

They were fine, everything was great, they got into a car accident, now every time they get in a care they feel panicky, scared and overwhelmed. We can do some EMDR, some counseling techniques to help them desensitize their fear around cars or to process through that specific trauma to find that freedom again.

But most of our cases are much more complicated than that. People's lives and stories are way more complex than them. And so if we can help, if somebody comes in and says, felt anxious for decades, and I don't really know why.

I had a great childhood, I just feel this way. You know, i'm gonna say, hey, let's look at your brain's electrical activity. Let's see why, from an electrical perspective, you may be feeling a lot of anxiety.

We can dig in on the counseling side and try to figure it out, try and understand where it came from and why and we may have some some great results from that but if we can also look at your brain and say oh my gosh your you know anterior cingulate gyrus is like way over activated and so much is going on of course you have difficulty transitioning from one thing to another or you feel stuck or your ruminating or whatever the thing is it's like we can directly teach you how to decrease the amount of fast-wave activity in that area and your anxiety will go down.

So it's pretty amazing to be able to show people what is happening in their brain. And then for most of the people we work with, they come in feeling bad about themselves because they feel bad.

When you can show them on an EEG that this isn't made up. This is real. There's objective data that says, yeah, you should be anxious, or you have a very difficult time paying attention, It's impressive that you got out of bed today.

Your brain looks very depressed. You know, like, wow, well done. It is so validating to their experience. And then to say, hey, we have options that may include talking about it, processing your past, doing all the counseling stuff, but it may also include you learning to self-regulate and changing the way your brain is functioning through neurofeedback and neurostimulation.

I love it. You know, you do a technique that EMDR, I've always been incredibly fascinated by it. I would love for you to share with the audience what it is, what the goal of it, is what your thoughts are about it and have you done neurofeedback training during a session of EM DR?

And if you did, What did you see? a lot of pieces to that. I will say, so EMDR, in a nutshell, a lotta people ask, hey, how's EM DR and neurofeedback different from one another?

And I think EM Dr is presented as a neuro-based or a brain science- based counseling technique. So in people's minds, there's some overlap. The reality is that they're not really connected at all.

But, EMDR stands for Eye Movement Reprocessing and Desensitization. It is a counseling technique whose goal is to reprocess past trauma so that the past no longer influences the person in the present moment.

So when we talk about a trauma, All of us have negative past experiences. Not all of them qualify as a trauma. And so if I think back on something that was really hard in the past, and I say, man, that one's hard.

That's not traumatic, right? It may have been in a moment, but it's a current trauma If I back to a past experience, then I get in touch with it and boom, there's huge wave of emotion.

Or my thinking changes, or my affect changes. I can't sleep, I cant stop thinking about it, and I start crying like we're having a panic attack. That is the definition of a trauma.

when the past is still alive in the present. Okay, so we're experiencing it right now again. It doesn't have to be a full flashback, but it's still, we are really feeling it now.

So the goal of EMDR is to process through those traumatic events that still have a lot of energy today and help the brain categorize it as a past event.

It's closed, it's over. And when I think of it, when i touch it and remember it there's very little to no energy left. it has been consolidated and stored in the past.

Traumatic events, our nervous system still believes they're alive and active. So they are still trying to manage them. So the process of EMDR won't have to get too much in the weeds, but essentially is to have one foot in past, partially re-experiencing the past event, one-foot in present, understanding that it's different now and I'm not there.

And then we're, I say we light up that neural network, when we start to feel it, that network gets lit up and we just follow we follow what our nervous system brings to us.

And so we tend to store memories in four main ways. Visually through images, through thoughts, cognitions, body sensations and emotions. Those are the four major ways and so with EMDR we're following, we might feel very angry and then we may have a thought I shouldn't feel that way.

And then our bodies, we may feel sick to our stomachs, right? And we have another picture, and we're just following this until it goes to a zero out of 10. How upsetting is it?

Then we repeat the process until is stays at a 0. There is an element of bilateral stimulation that happens with EMDR. And so originally, and still in large part, it's an eye movement based technique.

So while you're processing, while your remembering the past event, your eyes are moving back and forth. Left and right. Some folks use audio and so there will be a beep in one ear and then a peep in another ear where you can use hand buzzers It'll vibrate in on hand vibrated in the other hand And nobody a hundred percent knows why this is really helpful But many of us think that it is a bilateral stimulation of the brain that's occurring so left hemisphere right hemisphere helps in integration or the reintegration of this information With neurofeedback, when you're measuring EEG, Dr.

Laura, you know this, your listeners might not. When your eyes move back and forth, it destroys all of the data. That's right. The optic nerve is a very powerful nerve in the head.

And so when your eye moves, the optic nerves moves and it creates this big electricity like wash back-and-forth, back, and-forward, And it messes the date up.

So we can't do that type of EMDR while we're doing neurofeedback, I guess you could do the hand buzzers or audio. It would be hard to attend to the neuro feedback and attend your own trauma processing at the same time, but somebody could.

One of the things that we do here sometimes is we actually use slow wave electrical current stimulation of the brain.

Who Neuro Colorado Helps and How to Reach Them

So it's an alternating current simulation at a very low intensity and slow frequency to mimic the eye movement electrical wave that goes across the brand.

And so there's a guy, Dr. Nicholas Dogris, who was the first I heard present the idea that maybe that electrical field that's waving back and forth over the brain is part of what helps EMDR be effective.

And he said, hey, let's use a stronger electrical field and actually use electricity. And so we're using this slow wave electrical alternating current instead of the eye movement for EMDR, and it has been quite effective for us.

So that's one of ways that we've integrated neurostimulation in the counseling technique of EM DR. It's been really

cool, really powerful. Sean, that sounds phenomenal.

I really hope the audience can grasp this, especially if you're living out in that Colorado area. What part of Colorado are you in? We're in Denver, kind of the heart of Denver itself.

So really grasp what he's talking about that we can, you know, the traumas that people go through. and the ones that are staying around and they're generating that same kind of emotion, we can incorporate the brain and settle it down.

And he's using not only EMDR techniques, but they are also using neurofeedback. Is it slow cortical potential? Is that what you're doing? No, it's actually, um, It's not neurofeedback, its neurostimulation.

Okay, and how are you doing that? Yeah, so we have, part of our practice is neural stimulation, and so, we introduce different types of electricity to the brain.

Predominantly, were using small amounts of alternating current electricity, can we can choose the frequency that we provide. So, anywhere from like 0.3 hertz, to like a third, well, it takes three seconds for one wave, you know, functionally you know maybe to 40 Hertz we can go into gamma but and what happens when you introduce alternating current electricity to the brain and again it can sound scary like electroshock therapy or something like that.

Yeah that's what people think so definitely clarify what that means. Yes I will clarify. What happens with neurostimulation is we're introducing electricity to the brain, but the is an electrochemical organ.

So when neurons fire, it creates electricity. When we look at EEG activity, we are measuring the brains production of electricity, so when we introduce electricity we recruiting the neurons to fire at the rate to synchronize with the frequency that we're providing.

Oh, that's great. And so if we are introducing 13 to 15 hertz, then the areas of the brain where the neural stimulation is going through will then begin to fired at 13-15 times a second and then they get good at it.

So it's an entrainment device to help the bring practice something that it kind of stinks at doing on its own until it gets good Electroshock therapy, and I am not an expert in ECT.

I'm not a physician. But it uses electricity, but in a very different way. The intensity is thousands of times more intense. And the goal is actually to deprogram the brain, to break down neural networks and neural patterns in hopes that somebody with treatment resistant depression or someone in a catatonic state where all other options have failed, if we just sort of break up this stuck pattern that they're in and kind of try to hit the reset button on the brain, then hopefully when it kind gets going again, it will reformulate in way that's better than a catalytic state.

And so we are using electricity to help the brain synchronize with something and build something, and ECT is trying to break or destroy or disintegrate patterns that are really negative.

Well, I think the key word here is resistant to anything else. So, well, tell us about where is your practice? How can folks find you? What is you website?

what is the ideal patient that really does well with your expertise? I would say, well, you can find us on the internet. We're at NeuroColorado.com. You can of course call us at 720-232-0834.

Okay, say that again nice and slow. 7202320834 Good. We have a wide range of folks that we work with. Different practitioners here specialize in a few different things, but I would say overall as a practice, folks with trauma, PTSD, complex PTSD.

The challenging cases for folks are something that really specialize and folks we really love helping. You know, anxiety and OCD and ADHD are all really common folks that we work with as well.

So basically folks feel like, hey, my life, like I don't feel the way that I want to feel. Or I feel that my past really haunts me today. Those are the folks we would love love to work with and help you go from kind of feeling stuck or hopeless or like life just, I don't know, life isn't great.

We would love that to help those folks go where they are to feeling much, much better. You know that I think one of the things that really intrigued me about having our conversation was even though we're both in two different professional arenas, look how we can come together and have a conversation.

This is the thing that I feel like our healthcare system is really missing is collaboration. And I always like to say it's like you put the patient in the middle of it and who can best serve and it can certainly be more than one and having that collaboration, don't you feel that the patient in the middle is going to be so better served when we as professionals are able to talk about things and see the benefit of each other?

Absolutely. And I think so many Well, not mental health professionals, so many medical professionals were quite siloed into our approach to seeing things.

And we are, from a counselor's side, we're not thoughts and feelings. We are part of a body. Our body and all of the complexities of our body influence how we feel.

You know, somebody may come in and feel depressed and their thyroid may be not producing enough thyroid hormone and they feel really sluggish and slow and depressed, right?

Like there's all sorts of ways where there is such important overlap. But because we're not communicating well, there isn't a lot of, it's not an easy way for integration to happen.

Yeah, I feel like it's really important to be talking and we're missing out on amazing other perspectives that can transform client care. Yes, absolutely.

I mean, and there's so much neat stuff out there and things are being created all the time and what might work really well for one may not work well If they went a different way, it would.

And you know, one of the very first things that I learned in neurofeedback was we gotta break that arousal pattern. Are you under aroused, are you over arouse?

So that we can begin to get some cognitive flexibility, so that can we begin get the brain to even think for a minute that change is possible. So I'm so excited to share that kind of information with you.

Do you see the same thing? definitely see the same thing. Yeah, when we look at I'll say quantitative EEG. And for folks listening, that is when we take an EEg of someone's brain and then we compare it to a statistical average.

So we say, hey, we're looking at this 10-year-old boy's brains. How does his brain's electricity, like the amount of electricity he has in different frequencies, how does that compare to other 10 year old boys?

So when look at that data, we can get, we get so much information about what is happening for them. And I think most of the time, but not all of time.

I can think of a teeter totter. Is it tipped towards the fast frequencies in this high sympathetic tone, this fight or flight kind of high activation tone and we need to work on calming the person down or are we tippy towards this slow wave activity where we're looking at more either depression but more often attentional issues or dissociative issues and we need to decrease the slow and increase the fast and sort of bring this balance back to this teeter totter on either side.

Some folks have both going on it's a little more complicated of a case but yeah we looking at that, why are we stuck in one side or the other side and how to create that movement initially for that person is so important.

And to bring the system back online or give it way more energy so that it can balance out. I just love it. So we're gonna wrap up our time together but if you know your clientele, What is something if you had the opportunity just to kind of get out on a microphone and tell everybody in your area, why should they come to you?

What do you have for many different people from the standpoint of encouragement to take that step and see what you can do differently? The thing I want to leave people with or if I could tell people is, of course, we would love to see you.

But the message I really want send is I don't want people to prioritize their health and their mental health, and to have hope that They can feel better and they're not as stuck as they think they are.

The hill to climb is not hard as you think it is. It's not easy either. Not a snap of the fingers. But there is hope out there and there are lots of approaches to feeling better.

Our goal is to take all of the soft skills, all the traditional counseling skills and the most efficient approaches to that as we can, but also to couple that with an understanding of brain and some technology and expertise in how to directly influence the brain, put those things together and to try and get a really top down, bottom up approach to helping somebody feel better.

I just love it, I do. I feel like we are energetically resonating and I really want to just highlight that one more time that two totally different professions and really focused on bringing the well-being and the balance to individuals, but we share neurofeedback And then we each have our own little compliments that we add as well.

Well, I'm going to encourage anybody in your area. I especially loved how you explained EMDR and how explained the trauma versus just a bad experience.

And I am sure that that has resonated with our audience and I know there's somebody out there that's going, oh my gosh, that me. Well, if that you, then I'm going to encourage you.

If you are in that Colorado Denver area, reach out to Sean and Neuro Colorado facility and have a conversation because you can feel better. It may be a little bit of muscle work to get it done, but you accomplish it.

So one more time, tell people how they can get in touch with you. Best ways to go to our website, it's neuro, N-E-U-R-O, Colorado.com. If you like phones better, feel free to call us.

It's 720-232-0834. You can reach us that way. Yeah, we would love to see anybody. We do free consultations with anyone who's interested in learning more about our approach to mental health treatment.

And if it's a good fit, we would love to work with you. And, if not, will help direct you to somebody that would be a fit for you." That's great. If you heard Sean on the podcast and it is going to get you call, I want you let him know, say, hey, heard you on Connect My Brain's podcast.

That way, Sean will know that he has a way of reaching his community and we always say the community is the world. So thanks everybody for tuning in. ConnectMyBrain.com is our website.

You're welcome to go take a look. And if you want any of the information that we discussed during the podcast, feel free to either reach out to Neuro Colorado or Connect My Brain and we'll make sure that you get that information.

Thanks for turning in today. Sean, thank you so much for being on the show. Thank you, Dr. Laura, it was amazing. Everybody be blessed.