Safety: More Than Just The Physical Transcript

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Introduction to Trauma, Safety, and the Nervous System

Welcome to this interview on the Biology of Trauma Summit 3.0. I'm your host, Dr. Aimie. We're here talking about the trauma disease connection in this interview I am so excited about because we're going to get very practical on a way that we can change our physiology.

We have this trauma physiology, we have stress physiology, and we need to shift all of that to a physiology of safety. And most people who come through my programs don't even know that they haven't been feeling safe in their body, that they've been going through life feeling insecure, feeling afraid, because that's just become our normal.

So in this interview, we talk about a specific branch of the autonomic nervous system. And I want you to understand these different branches because it will help you understand how this device actually changes your physiology.

It's so exciting. And so let me pull up the what I write. So this is actually a chapter from my biology of attachment and neurodevelopment course. And in this I walk through the different branches of the nervous system.

So here is your brain and your spinal cord that is called the central nervous system. And then you have all of these other nerves that come out from that that are the peripheral because they are on the outside of that central area.

Now, here we see that there are different branches of the peripheral nervous system. We have the somatic sensory. That's one that we're going to talk about a lot in this interview, because it is what brings up information to the brainstem and the brain about what's happening in our body.

And then we have the autonomic nervous system. So this is where we have the vagus nerve.

Somatosensory Pathways and Body Sensations

The vagus nerve is part of the autonomic nervous system as it's part of the parasympathetic, it's part of the facial and thoracic and it's part of the enteric.

So the autonomic nervous system is a branch is a function of the peripheral nervous system. And we also have the somatic sensory. So the somatic sensory is what brings information from the body to the brain.

And then the autonomic nervous system sends things out. Now we do have pathways that run back up to the brain from the vagus nerve. But this is what's important to know that you have somatic sensory.

So this is why somatic experiencing works. This is why somatic work happens by changing our physiology, because we can actually sense like, how do I feel this touch?

Or is it is it bumpy? Is it smooth? What exact sensation am I having in my stomach? Is it a tightness? Is it a twisting or is it a constriction? We can start to identify the different sensations that we have through that somatosensory pathway, and this is what allows us to detect things like meaning associated with that sensation, so that if someone is holding my hand, there is a meaning that I have with that sensation.

And we've also done that with our body. So when we have that sensation of maybe butterflies in our stomach, we automatically jump to the meaning of that of, Oh, I'm either excited about something or I'm nervous about something, but there's a meaning that we have attached to the different body sensations.

And one of the things that's really helpful is to get out of the meaning of things. So what we do in the 21 day

journey, we call that going into the story.

And we don't go into the story. We don't go into the meaning of things. We just are able to start identifying. I have this sensation and this is what I can do about that.

And so it's all about empowering you to have actual control over your physiology, over your state, because we're not associating the meaning with that, but we're able to identify it and then support it, change it, work with it so that it's not driving us.

But we are in control of what's happening in our body. Huge super shift, especially as we look at trauma physiology and that feeling of I'm out of control and maybe I'm even confused and alone and feel all alone and feel unsupported.

Being able to get back to a place of feeling in control of what's happening in my body. And it starts with identifying those sensations that are happening.

So with that, I'm excited to share with you this tool. It's a tool that I use regularly. And so I've invited my friend Dr. David Rabin, and he is a neuroscientist, he's an MD PhD, two doctors and a neuroscientist, board certified psychiatrist, health tech entrepreneur and inventor who has now been studying the impact of chronic stress on humans for over 15 years.

He is the co-founder and chief innovation officer at Apollo Neuroscience, which has developed the first science typically validated wearable technology that actively promotes sleep, relaxation, focus and calm.

Using a novel touch therapy that signals safety to the brain through vibration. Dr. Raven is the executive director of the Board of Medicine and the medical director of the Apollo Clinic.

So with that, let's jump into this interview and learn about the somatosensory pathway of the autonomic nervous system and how we can use that to help us.

As we know, it's so important for us to be in that parasympathetic state with our nervous system.

Meet Dr. David Rabin and Apollo Neuroscience

And so tell us about how we can actually help our body get into that parasympathetic without having to stop everything that we're doing and meditate or do yoga, but just be able to provide that background, background support for our system to shift and stay in parasympathetic.

Yeah, that's a great point and thank you so much for having me. I think be the main in that the things that we know about, that we talk about all the time that get us into more of a person pathetic vagal state more quickly, which is effectively helping the body activate recovery more quickly.

And everything to do with recovery sets immunity, reproduction, sleep, rest and empathy and all that creativity. In a lot of ways, all the things that we do or not under threat and that make our lives rich and and enjoyable.

And so when we are when we bring ourselves into that state, a lot of the you know, we talk about this a lot in the mental health space, but it doesn't always translate into the physical space, which is that safety in the modern day is not just about physical safety because most of our most of our physical safety needs are accommodated and not we're not under physical threat most of the time, thankfully.

And that being said, we have other existential threats, like like overstimulation from the environment, too many screens, too much news, too many responsibilities, too much too much construction sounds around us all the time.

Right. There's just a lot of incoming information. And most of us haven't been taught that techniques to sift through what we should be paying attention to and what we should help restore that parasympathetic recovery nervous

system, which are like breathwork techniques, meditation, mindfulness, yoga, which is like almost like a movement in modern Western movement, meditation technique.

And then and there's other things too soothing touch, soothing music. Music is probably the only most commonly used without realizing that it's helping us activate our parasympathetic recovery nervous system.

But these techniques are really important, and the more that we can do them consistently over time, especially with soothing touch and things of that nature, the better results we get because the more balanced we are, more of the time that our bodies learn to be in balance.

How Touch Signals Safety to the Brain

So Apollo is a tool that we developed to deliver vibration to the body that feels like soothing touch that activates that part of our nervous system on the go.

Which is amazing because as we look at what the vibrations do, it's not just a superficial touch, then it probably is activating the nerves at the deeper touch level.

Right? Or how does the Apollo actually work with stimulating those those touch receptors and helping it feel like you're getting a hug or that someone's holding your hand through something?

So it turns out that. All right. And that's a great question. And I think that the simple answer is that there are two pathways, one of which stands for all for all of our senses, every sense, touch, sight, sound, smell and taste.

They all have two major pathways. One of them is the is that what we call this amount of sensory pathways? That's like the pathway. That is what does this feel like, right?

What does this taste like or smell like? The character of it, the nature of it, the physical stuff. Right. Is it sharp? Is it is it smooth? Is it slimy?

Right. What is it? Is it rough? What is it? Bumpy ride, all of those kind of things in terms of touch texture, is it vibrating fast as a vibrating? So is it hot or cold?

Are all kind of like objective, what we call somatosensory sensations. So like what does it physically, what does a physical experience like? That's the pathway that we've studied the most.

And then over the last 50 years or so, there's been a lot of work into this. The other pathway, which is called, which is effectively the emotional pathway, and so it's transmitting at the exact same time as the sensory pathway that we know and love.

It's transmitting the information about what does this feel like in our emotional body, right? What does this mean to me? What does this remind me of from the past?

And it's not always positive, but in the case of certain things, like the smell of chicken soup, right, it's often like a very overwhelmingly positive, soothing sensation for a lot of people because it reminds us of something safe that we were fond of as children.

And so those kinds of experiences are very powerful to change the way that we feel and the way that we experience things in the environment. Because effectively, when we're afraid all the time or we're overstimulated or stressed all the time, all of our resources are getting devoted to the skeletal muscles, our heart and lungs and all of the fight or flight things that think we're in danger, but we're not actually in danger.

So we don't want those parts to get all of our blood and resources we do have are actually running from lion, but we don't want we're trying to answer emails and we're tired, right.

So or we're second traffic. So we want by reminding ourselves that we're safe which you know, Apollo delivers these soothing vibrations that effectively go down the emotional state.

We figured out how to activate the emotional pathway of touch in a way that reminds you of a hug or reminds you of holding a purring animal or reminds you of somebody holding your hand they like.

And that feeling is soothing, just like the smell of your mom's chicken soup or someone else's chicken feed. Their mind is eating mom's chicken soup. So it's that it's tapping into that that hardwired emotional memory of soothing touch.

And what's really interesting about touch, even more so than music and taste and smell, even though those feel very, very powerful. And same, of course, is that touch is pre-verbal.

So it's it allows us to invoke experiences without words and without any real cognitive or cognitive understanding, because it's evolved 400 a couple hundred million years since the oldest mammal.

So it's hardwired into our nervous systems from, you know, millions of years ago when the old and most ancient mammals were nursing their newborns because that's how they were communicating safety.

Right. And we still do that to this day. So that so it's really that safety pathway from touch from the skin to the brain. And it is exists in all of us. We're all born with it.

And it's extremely powerful in terms of the way that makes us feel good, but also modulates the way that our nervous system functions and makes it function more towards recovery, more towards parasympathetic.

And so, Apollo, since none of us actually get enough touch in our day to day lives and we saw this in the mental health patients and was just a common thing, especially in Western culture, you know, not like Latin America, where they're hugging and kissing each other all the time.

But here we're very like distance in a lot of ways and touches like shunned after childhood, basically in most of us don't get enough of it or it's withheld.

And so, you know, we saw that there is an opportunity to give people some of the benefits of it, that they were in control, which is also helpful and empowering that they could share with them.

Caregiver Burnout and Early Study Results

And we realized it really helped us, even though we started with PTSD and realized that we were using it and it helped us sleep better, function better during the day.

And so we made it a consumer product that anybody can access. And it's true that even though it may have started with PTSD, this is something that is just daily life.

It's daily life in our modern world where we are touch deprived, where we are walking around in fear, not even necessarily realizing it, because this is just our baseline, right?

Like we're constantly bombarded by noises and screens and news and responsibilities. And so it because it's our normal, we don't think about it and we don't realize how much our system is in that biology where it's shunting the blood to the skeletal muscle and not actually helping us live our best lives and be our best selves.

So I love I mean, and I and I love using the Apollo. And what it does for me is exactly that just creates that baseline like everything's going to be okay, right?

And the resilience that it gives someone. Right. And I know that you guys have studied this, especially in caregivers, where I think that that is a huge area where burnout is present.

And I mean, talk about, you know, like meaningful touch, desperate deprivation, perhaps. So what have you seen in terms of actual data and numbers for how this is transforming someone's life?

Yeah, I think the data is really exciting. And, you know, we've been studying this since we're studying the technology since before there was a company is probably back in, you know, 20, 2014 when we first started.

Then we started using it in trials with people in 2016, 2017. And what's been really interesting is seeing it being, you know, being used in these very, very hardworking frontline health care provider, stressful jobs.

We first noticed it because when we made our first prototypes, this was discovered very organically, as you might imagine. We made our first prototypes out of the lab at the university.

We were testing them on ourselves and and in studies. And so we had them in in the psychiatric E. R. when I was working. And my my colleagues and I liked them so much that we were passing them around to each other in between patients just to get, like, a little bit of extra juice to finish our notes and go back and be fresh to see some of the out so that you can imagine, like ever worked in VR, you know, you got to recover really quickly.

It's like it's like playing ice hockey, you know, like your time on the bench, you know, has to be spent very efficiently. And so this is really interesting.

And then we thought about all the other folks, especially when the pandemic, you know, surfaced, what how many folks were experiencing burnout in our positions as physicians or nurses or, you know, caregivers of all kinds and looking at seem like the positions suicide rate right now is higher than it's ever been, which is tragic because these people, you know, like us, are some of the most highly trained, able caregivers.

And we put so many resources into training of these folks that we should be, you know, that, you know, we really should be taking better care in prioritizing better care of our caregivers, because that will, you know, radiate tremendously outward to the entire community at large.

We have a tremendous shortage of caregivers, unfortunately. So ultimately what this let us do is to go to nursing homes and to go to place hospitals and places where frontline health care workers were really struggling for a large part, and trainees like residents and fellows, and to offer them a policy news on the job and it was really interesting.

You know, I think the you know, it starts out with just case studies giving devices to to doctors and and caregivers and know we had a couple hundred people who were using it in the community, not part of a trial who were just reporting and sending us that wherewithal data and reporting that they were sleeping better and just having tremendous benefit in terms of day to day relief and just feeling like they're, you know, the hospital kind of tends to throw off your rhythm because you're working shift work a lot of the time or have really off schedule.

You have to be on call later, ready to go in any moments. Your sleep gets disrupted a lot of the time and and so that sleep regularity and increasing the volume wind down wake up and I'm energy and stay focused with less caffeine was something that was really interesting to see the people were reporting consistently and then we went to the nursing home population where we actually were originally trying to get a policy on patients to help them regulate their anxiety and and mood in in the nursing home setting, which is challenging.

But before getting it on the patients, it was easier to get it on the staff. So the staff used it for we had 14 staff members at a skilled nursing facility, used power for just two weeks, and they took a depression of a clinically validated depression questionnaire in advance.

And before starting at 12, all of them, all 13 are sorry. 13 out of 14 of them were scoring positively on the like for depression. They met symptomatic criteria for depression and they had not been diagnosed with depression.

These were this is just work related stress that was manifesting as depression on a clinically down in depression survey. And that score decreased by 40% in just two weeks.

And using just getting a little bit of that and they were using it on their own.

Why Tools Matter Before Diagnosis

You know, we did in one session of how to use it with the Q&A and then they just not use it on their own. And 40% decrease average across all of them, which was really, really interesting.

So it was having a very significant impact on just their ability to function at work and feel better at work and improve mood and decreased, you know, ruminative anxiety thinking and improve sleep.

So we're starting to see more of that. And that's the data from that is now turned into a 500 person study that's actually being run through the University of Pittsburgh Medical Center System, where residents, trainees and attending physicians can get access to a free Apollo to be part of this basic prevent physician burnout study.

And that's going to be it's run by co-led by myself and Dr. Michelle Thompson Olsen, who runs the Integrative and Family Medicine Programs at University of Pittsburgh Medical Center, and Dr.

Joe Moran, who was the vice chair of neurosurgery at the North Spitsbergen Medical Center. So it's a very exciting study because I think it's an opportunity for us to show how we can we can, you know, tracking, tracking how people are doing is helpful.

But now we actually have a way to use that to search using data to intervene and prevent attack. How comes that people are having by giving them more tools they can use at home?

This is huge. I mean, these numbers are are huge. These are life changing. And as you were talking about the yes. The physician suicide rate. But but the burnout among caregivers across the world like this is this is the epidemic.

And it leaks onto the inevitably the care for the patient. Because if you're expecting these caregivers to just give, give, give without filling them back up, they're running on depletion mode.

They're running on fumes themselves. And it's just a matter of time before, you know, their body gives up. So being able to come in and provide them a tool like this, it just helps them be more resource, be sleep better, be more regulated like this is this could change the health care system. Dr.

Raybon That's the goal as the goal is, because ultimately it's not you know, it's not to say that there's anything wrong with medications in prescriptions, but we do what we have a problem with is that we don't have that many tools that come from that come in between when you start to feel crappy and when you actually have to receive a diagnosis to get treated.

And then receiving that diagnosis results in a prescription of a medication that you have, you're being told by a professional you're going to take one or multiple times a day, and that effectively externalize the healing experience to the medicine.

Right. So talking about from a very, very psychological perspective, if we all experience challenges or some kind of like traumatic events in our lives because life is challenging, we're all going to face difficult times where we're not adequately supported afterwards.

Right. How do we how do we help ourselves, you know, effectively learn to retrain ourselves to this, to be safe enough to remember that we're not currently under threat and that we can, you know, take time to take a deep breath and recenter and effectively like widen the window.

I think you familiar with that term is you're just like going from tunnel vision, fight or flight to recognizing that there are actually lots of different choices that we can make right now.

And we don't have to make choices from from a fear perspective. Right. Like like the negotiation advice that

everybody gets is always negotiate from a point of strength, right?

You never negotiate for a point of weakness. You get what you want. So this is the same thing with life. And what I also love about this is that it's not based on a diagnosis, because what I got from from the studies that you guys did was that people are walking around depressed and yet don't have a diagnosis of depression.

And the same thing with anxiety. So people are walking around with anxiety and yet they don't go in and get a diagnosis and yet they're still struggling.

And this is still affecting their quality of life, their physical health, their relationships with their family. The effects are widespread. And so when we just look at the numbers for, oh, this many people are diagnosed with depression, this many people are diagnosed with anxiety.

We are still missing the majority of people who have these symptoms and are just pushing through. And so for them to be able to say, you know what, here is a resource that I can use.

I don't need to go in and get a diagnosis and get get the prescription that I don't want to take, which is why I haven't gone in. But being able to have tools that regardless of a diagnosis, these are going to help.

You just have that place of safety. And I will say that most of the people coming through my programs, that is exactly what they say, Dr. Raybon, is that they didn't even know that they didn't feel safe.

Right. This has just been our normal. Right? Yeah. You nailed it. And that's what I was getting to earlier than I think I probably ramble around. But the idea is that feeling safe in Western culture, feeling in control right.

Apollou2019s Effects on Sleep and Recovery

And particularly feeling in control of how we feel and how we treat and how we make ourselves feel better and the healing process itself. Right. Like we are taught from a young age that we are not in control of our own healing health in the process.

Then we are going to feel disempowered to actually do anything about it, right? So the so being able to have tools like Apollo or tools like reliable supplementation or meditation or mindfulness or yoga, biofeedback, breathwork, etc..

Right, the list goes on. But having tools like that that we teach each other how to use and that we have access to before you need diagnostic criteria for an actual mental illness that give you something for everybody else, like you said.

And in that area where we we are struggling, we need support, but we don't necessarily need this high level of support yet. Right. Which feels oftentimes where the system is built and designed, disempower, caring, because you're given often you're given a diagnosis which then is associated with a terminal condition that at this point in time, we don't tell people you can get actually better from long term, right?

So that in and of itself, once you receive a diagnosis, if you're not if you're not, if you don't realize that you don't have to think about it, that way, most people think about it as, Oh, well, now I'm sick forever.

Maybe I've always been this way, right? And so then we associate our identity with the illness, and then that extends to our past and to our future, which means that we're a heck of a lot less likely to step out of that pattern, because we've established that as our path and trajectory that we've been on and we'll be on.

So there's that time in between, as you said, is actually, you know, is it's not it's in this case, it is like a critical period into to give people more tools so that they can say, oh, I addressed my problem.

Right? I realized I wasn't feeling that good. And I went and I got X and Y and try to power or got more sleep and

change my sleep habits or whatever. And now I'm feeling better because of these changes that I made and I didn't need to go to somebody else to do that or I didn't need to see somebody else or get medication regularly to do that.

And if you need medication and you need to see something else, that's totally fine and nothing wrong with that. But we need more stuff before we get there.

More first line. And what I've seen a lot over the years is that a lot of people are going to those medications because they don't feel like they have any other tools.

And so I can think of several people that I know who are rather high functioning, right? Like you never know that they were on an antidepressant, that they were on a low dose Lexapro.

But for them, they have felt like that is their only way of having some control over their emotional state. And so they are super afraid to get off of it.

They actually got on it because all of their friends were on it as well. And so we're stuck with not having tools, with not knowing what are the options available to us other than this, this one path.

And I love I love that the apologist comes in and says, no, like you've got tools, you've got you've got another tool, another option that completely changes your physiology even better than what a mood medication would do because it doesn't come with side effects.

Right? Yeah. It changes it naturally and within and within minutes, like our studies at the University of Pittsburgh have shown that, you know, even though they were early studies, they were double blind, randomized, placebo controlled crossover trials, which are the most rigorous kind of study you can do.

And we saw reliably within two or 3 minutes, your heart rate variability goes up under stress. Right? So that is that is what happens when you meditate or deep breathing under stress.

That is very unusual to see anything other than deep breathing and meditation and doing like natural calming techniques or touch or, you know, something where somebody else has to be there to help you do a technique or something like that.

And when you see people's HIV go up, their performance goes up, right? So there's a really interesting and that and then we see long term in the studies that are coming out that that are even more than and even more exciting because they're real world studies are conducted in real world populations and where they're observed observational but in over a thousand people and we've seen that Apollo is very significantly increasing people's sleep quality and duration, which is really interesting in a very and it's cumulative.

So it's additive the more that you use it, which is the way, again, that deep breathing meditation and exercise work which are all autonomic toning activities.

So meaning that they increase the balance or improve the balance between the sympathetic fighter flight system and the parasympathetic rest and digest system.

Most of the time it's like this stress is high, sympathetic high, parasympathetic is low. So as you do these exercises gradually restore the balance, and Apollo helps restore and support that balance through touch.

And if we were touched more often, then we probably wouldn't need Apollo. That really helps. But yeah, in that world, whenever it does come until then.

Until then, the Apollo is a really helpful tool. So how would someone actually use it? Is this something that you would have them wear at night for sleep during the day when they're working, especially when they're working in maybe a caregiver role or a high stress role, or how would someone actually use it for the benefits that we're talking about?

Using Apollo in Daily Life and AI Sleep Support

So what we've seen in the studies that's really interesting is we look at the way people use it and we've seen what patterns of use get people the best results biometrically speaking.

So like with the ordering here, like when we measure people's data over years or month, months or years, what behavior patterns tend to get the best results.

And so it seems we can tell that using Apollo for about three or 4 hours a day, five or more days a week, results in very significant gains to sleep and cardiovascular metrics.

So on the order of up to 30 minutes more sleep a night, 90% more deep sleep, 14% more REM sleep, 4% reduction in resting heart rate, 11% improvements in HRT, which are cumulative over a three month period.

So that's comparable to what we see in studies of adopting a new meditation practice or a mindfulness practice or yoga practice, which is really interesting all by balancing autonomic tone.

And sleep is I feel like the secret magic potion for a life of resilience. And so I'm fascinated by these numbers, say those numbers one more time for the changes in sleep when someone uses the Apollo in this way.

So up to 30. So 3 hours a day or more, five or more days a week of using Apollo. And and I will say also that you can do that simply by going into the app, hitting schedule and then setting your wake up times and your sleep time.

There's eight Apollo vibes, so you can choose to set whichever ones you want for whatever parts of day that you would like. And so I have a focus vibes in morning.

We keep focus to energize energy, to watch coffee. And I have a little bit of focus, a little bit of recovery in the afternoon and then social in the evening to keep me going for dinner and going out after work and then relax and sleep schedule at night for a total of about 3 to 4 hours each day.

And by and I do that and I do that at least five days a week. It's not usually seven and that, from what we've seen in the studies, gives people up to 30 minutes more sleep a night and 14%.

That's concentrated in deep and REM sleep, which is interesting. So light sleep actually comes down and deep and REM sleep go up by 19% and 14% respectively, says people are falling asleep more quickly and they're staying asleep longer because they're active.

When they wake up the middle of the night, they just reach out to me, tapping about the buttons on the Apollo, about going to their phone and it resets to sleep times to keep them asleep.

So they people are not only falling asleep more quickly, but they're able to fall asleep more quickly. And when they wake up in the middle of the night and now Apollo Labs, which is the membership program, which is the first A. I.

for health, well, actually, this is still invitation only, but you can sign up on the wait list to join in the app or website. And it actually we taught it how to predict.

When you're waking up in the middle of the night and turn on automatically to keep you asleep without you doing anything. So that is the most exciting feature that we just released.

And I'm happy to announce. That that is really cool. Feel like that is how technology can serve us, right? Like that right there. Is that actually like you don't have to do anything, you just put it on it, learns about your sleep and then it services your sleep issues by by detecting and responding, right?

Like it's like what? What my colleague Ken Ford, who's one of the nation's leaders and I talk about, you know, is wrong with the field. Is that the whole point of the AI is that we're supposed to be making technology that augments

human intelligence, right.

Like glasses, like, you know, you can these are such an elegant technology because I can't see it all and I'm not wearing them. And then I put them on and my entire life has improved and I don't remember their I maybe wearing them. Right.

So it's about like technology that does that. And you put it on and it improves your health or your life or something about your situation without you having to really like do much about it gives you time back effectively.

Give you time back, gives you sanity back, right, gives you sleep back. This, this is huge.

Closing Thoughts and Future Research

So I just want to also acknowledge and thank you for your your work on this and what you've brought to, to the world through Apollo. How can people best find you and get set up?

Well, you can find me at Instagram or Twitter at Dr. David Rabin. I always like to hear from you. Your questions, please feel free to reach out. I'll get back to you as soon as I can.

I'm also on clubhouse doctor Dave Raven and we do some regular Q and A's on clubhouse called the Psychedelic Report, which is about how psychedelic and consciousness medicine as a technology are helping to address mental health issues, which is really fun.

And you can check out that show on Apple Podcasts and Spotify and you can find Apollo at wearable hugs dot com. I love it, I love it I love it. Some very practical ways that we can bring regulation, health, resilience to our life.

We don't need to get into the meaning of things. We don't need to go into diagnoses. We can just be empowered with wherever we are to go that next step.

What is that next best step for us? And this is actually something I've considered studying and I am wanting to put together a study for those going to my 21 day journey and who will use the Apollo and see what difference does that make?

Because in the 21 day journey, we go on a journey into our nervous system where we're learning how to identify these sensations, change them, modulate them.

And I feel that the the combination of using the Apollo neuro device would be magical for that journey. So we're going to be starting to study that as well.

And so thank you for joining me for this interview. Again, this is the Biology of Trauma Summit 3.0. Still plenty of time to invite friends, family members, coworkers, anyone who would find value in this summit and this information.

So feel free to share it with them. You can also purchase all these recordings because I do know that this is a lot that I have included in this summit, and I want you to be well resourced and not stressed out about having to watch all of these interviews with the timeframe that you have, but being able to watch them on your own time.

I'm your host, Dr. Aimie, thank you for joining me. And we will see you on the next interview.