Revitalize Abilities: Virtual Exercise Programs to Improve Function for People with MS Transcript

(Transcripts are generated by AI and may contain errors)

Introduction and Trevor Wickhamu2019s Background

Welcome to another interview for the mRNA Immune Summit. I am Doctor Walls, your host, and I'm here with my good friend, and colleague, Trevor Wickham. Now, Trevor is a movement neurology specialist.

He has a master's degree in exercise science and biomechanical analysis. He has, many, many certifications related to this, medical exercise. No centric movement, corrective exercise, strength training, conditioning.

He is a neuro nerd and obsesses over studying how neurology, kinesiology, a, science of movement, anatomy, physiology, and biomechanics all work. Now, Trevor's worked on clients ranging from nine years old to 97 years old.

His deepest passions are those, with neurological conditions, including multiple sclerosis, Parkinson's, stroke, total brain injuries after 20 year, career history in brick and motor.

He decided to take his expertise online. And that is just so phenomenal. We're all so very, very fortunate, for that. And Trevor was a phenomenal success last year.

I loved our interview. People loved the interview. So it's really thrilled that you, came back to join us again. Yeah. Trevor, to be here and just honored to be part of this whole thing.

And hopefully we can have a good time. Give him give, give some good information and help a lot of people out. You know, the other thing I want to tell everyone is, Trevor and I are working on, some research projects together.

You know, I'm. Yes, very, very excited. You all know that I've been studying diet for a long time. We started out studying diet and exercise together.

And I'm, just so excited to be able to once again begin to pair diet plus exercise. So, let's talk first about the gym, which is, you know, that new entity that you created.

Can you tell us what that is? Yeah. So we're the largest online platform for movement training, mindset training, education and community right now. What we really want to focus on are people with neurologic conditions.

Movement is such a powerful healer, and it's, it's something that is very empowering to people and empowering to clients, especially when, you know, your body kind of turns on you.

You know, you end up with a neurologic condition, you end up with something that's unexpected and like, comes out of the blue oftentimes, and your body just starts not working the way that it used to.

It can be very scary. And there's a big fear of the unknown. There's a big fear of what can happen tomorrow. And when you start to lose control of your vehicle in this life, which is your body, it can be a very threatening experience, a very frustrating experience, a very discouraging experience.

And so, you know, six years, know, six plus years. Now, I took all of my expertise that I've been training because I've had a passion for neurologic conditions and chronic medical conditions since I was 18 years old.

The Movement Gym and Online Neurologic Training

That's all I've worked with. To take this online because I was very limited by my my space, you know, is limited by

distance and time and all that to my local community.

And we were having such good success. But I always had this burning desire inside of me that I'm like, there's so many people out there that need help.

And I have I constantly had clients coming back to me being like, is there someone like you in Texas? Is there someone like you in in England? Is there someone like you in Africa?

Like because I have a relative or I have a friend that has Ms. or Parkinson's or Lyme disease or whatever, and I wish you could help them. And I'm like, I just got to this point where I had to do something and I had to take this online.

And now we're in well over 40 countries across the world helping people. That, that can't really find a lot of help elsewhere. So I'm very fortunate to be where I'm at.

I have an amazing staff, amazing ownership team, and a community that is incredible of people that are so, so encouraging, so knowledgeable, so committed.

And really we're just we're just a unified front coming forward and really helping people heal and feel better. So, it's it's a pretty awesome world. So what sort of talk a bit about this.

So this is online and that you probably people with a wide variety of physical activity levels and mobility challenges. So how does that work? Yeah. So we, I've been fortunate to work in this industry and doing this kind of training, you know, very functionally based, very brain based, very human movement based for my entire career.

And so I have 20 plus years of experience behind me. And I've seen and worked with, I've been fortunate to work with a lot of people with a lot of different mobility levels.

And so when I sit down to create a program or when I, when I have sat down in the past to create programs, I literally will put on the wall behind me just sheets of paper and run through algorithms and flowcharts and everything else.

And I'll write below there, you know who's this good for? Who's this not good for what mobility challenges are going to be like, what are we building up from?

And it's allowed me to create this canon of programing that is appropriate for people that are all the way from bed ridden, like mobility level one out of ten, all the way up to mobility level, you know, nine, nine and a half, ten people that have mild symptoms that they're just kind of disturbed by them but want to keep protecting their brain using the power of strength, the strength training and endurance training and mobility training and all that.

So we've created a very wide variety of programs that I, I've, I've thought through. There's a there's a very consistent progression in them. And it's been really cool to watch people who were barely walking come in and, you know, six months to nine months to a year later are up on a roll later or up on, trekking poles or some of them are walking unassisted. Right.

There's just a progression, a way that the central nervous system learns how to how to access the auxilary neurologic pathways in your body to start restoring function and restoring strength and balance and mobility.

So we have a spectrum that meets the needs of pretty much every mobility level from a level one to a level ten. Okay, so I school that should back up, just a bit to explain.

Have you talk about why exercise is such a important, self-care routine for people with Ms. or any kind of neurologic problem? Yeah. So your brain, your brain has three main functions, right?

Number one is survival, right. Number two is is, proprioception. Number three is movement, like just full out

movement. So when we talk about movement, like your brain is made to move, right?

And I mean, me speaking right now, there's movement happening in my, in the muscles of my pharynx that are allowing me to speak. We need to be able to move, to experience this life and live the activities of daily living and be human.

And so your brain was meant to move. And every thought that you have, every word that you have, every experience that you have, every activity that you do, it's all based on movement.

Because if we're not moving, we're doing nothing. Right? So when when our brains are wanting activation movement and then gas exchange like breathing and then nutrition are the three main things that drive brain activation.

And what happens with a neurologic condition oftentimes, whether it is a, like a demyelination issue, whether it's a hormone imbalance, whether it's a structural problem, whether it's a bacterial or pathologic thing, where like Lyme disease, where you get invaded by something anytime that movement is compromised, your body freaks out like it goes into a massive threat response.

Why Exercise Matters for Neurologic Conditions

And it just wants to protect itself because it's so used to doing things one way, it's so used to using what I call brain maps between your brain and your hip flexors, or a brain and your foot, or your brain and your arm.

It's used to doing things one way, and your brain loves predictable outcomes. It loves repetitive patterns. Well, when that one way between your brain and your foot, for instance, gets blown up by demyelination or, endocrine imbalance or something like that, like your body doesn't know what to do.

And so by using movement training, we can actually help the brain navigate and find, all of the other alternative neurologic pathways in those neuronal like neuronal networks that connect to your foot.

So once we start to actually get those, those, those movement patterns reestablish, we'll pull in other parts of the brain to help your body function better to allow your foot to move.

And it's not just muscles. We activate the visual system. We activate the vestibular system. We activate your intrinsic kinetic chain, which is a lot of breathwork.

We, integrate brainstem activation and what's called reflexive stability, what's called cerebellar, rhythm and balance. We put all that stuff together to optimize how your brain works so that your body moves better as a whole.

And when your body knows how to move better as a whole, it will it will self-select these alternative neurologic pathways much, much easier than just trying to do traditional physical therapy or fitness training or corrective exercise or anything like that.

So that's why it's very important. If you have a neurologic condition to do neuro centric activity, to do brain based activity, where you're looking at the areas of the brain that that generate or initiate movement patterns and you strengthen those first, and then that carries out into your limbs and your muscles and your joints and your and your, to help you move better, to help your functional activity improve and your functional capacity be optimized so you get to reestablish, the way that you move, the way that you think, the way that you live and reduce and counteract a lot of those symptoms.

Does that help clarify a little bit? So this sounds like it's really, even much more advanced than a traditional physical therapy. Yeah. It's just this is very it's it's very integrated.

Right. So I've learned from some amazing physical therapists and some amazing chiropractors, and some amazing neurosurgeons and neurologists, like, I've just hung out with really smart people for a long time and kind of kind of

gleaned from them and listened to them.

I've been in surgery rooms watching people get put back together for over 2000 hours. Like, I've just I just, like, made my life about understanding how human movement works.

And so movement isn't so simple and exercise isn't so simple that you can't, quote unquote, screw it up, right? You need to do something that's specific, that actually meets the demands of what you're wanting to improve.

So if someone is wanting to walk better or use their foot better, or counter foot drop better, then we don't necessarily want to put them on an exercise machine and just have them do a leg press, because that's not very functional for what they're going to be doing in life.

There's a there's a specificity principle in movement science that says that specific adaptation to imposed demands are what are going to create the, the, the results that we're looking for.

So every single program in the gym that I've created from all the way from the bed bound exercises all the way up to our highest mobility, the highest mobility programs, which is what I do in here because I have Lyme disease myself, and it's what I use to heal and what I use to manage my symptoms.

Everything has to do with integrating the human movement system so that your brain functions better, communicates with your joints and your nerves and your muscles better, but also improves your brain's ability to take in information through your eyes and your ears, and your external senses, and also the proprioceptive system inside of your body.

So I think your body feels more confident using itself and not Trevor, I I'm going to stop you there for a moment. Yeah. People may not know proprioception.

So yeah. So proprioception is basically like the ability to connect with your body and know what it is doing. So if my hand is over here and I'm not looking at it, I'm looking away.

I know that I'm moving my index finger right now, okay? I know that I'm moving my thumb in a circle. I know that I'm touching my pinky to my thumb and my brain can feel that.

So you have external proprioception, meaning how I'm interacting with the world. You also have what's called like, what's called interception, which is where you're connecting in with your own body.

So a lot of people with neurologic conditions often feel separated or disconnected from their body, which is a very threatening and very like it's just a scary place to be.

And so once you start to understand and once you start to actually feel your elbow move right again, or feel your neck move without pain again, or understand if you're falling to the right how to stop that and then pull yourself back to center.

It creates this increased sense of self and sense of movement, which is proprioception. And when your brain is better connected to your body and yourself and your self and your body's better connected to the brain, and we can communicate that better, that's when symptoms start to reduce.

That's when we start to restore functional capacity and strength, and the ability to do the things in your life that you're wanting to do with less strain and stress and fatigue.

So I think I'm hearing you tell me that, your exercises include a component of awareness training, correct?

Proprioception, Sensory Input, and Brain-Based Exercise

And a component, of sensory training for the eyes. The ears balance. And then we have probably progressive

exercise that's very specific, very targeted, depending on what my goals are.

Correct. Yeah. Yep. No. For for the listeners, if they're like, well this sounds interesting. And I have how would I know where to even begin? Because this all sounds, you know, what you described sounded really complicated.

And I'm not going to know what to select because I'm not as smart as that trauma working guy. I just know that I'm, you know, I'm stumbling. I'm falling.

I'm. I'm choking on my food. I'm coughing a lot and I'm a mess. And so I would have a really hard time figuring out, where to even start. Yeah. So when you, when you come into the gym, we've actually created a series of orientation videos and navigation videos that help people really determine where they need to start.

My opinion, I mean, I'm, I'm, I, I, I kind of bounce back and forth between being pretty aggressive in my approach, meaning like, we got to get after it and I want you discipline and I want this to be part of your daily routine.

But in my approach, I always on the side of like, more of the conservative side of things where you don't want to push yourself too much. We want to give your brain time to learn.

We want to give your brain time to feel comfortable and not feel threatened doing the activities that you're doing. Because what I've heard so many times is people come to me and they're like, I've tried everything, but either the person that I'm working with treats me like a baby, or they treat me like I can't do it, or they don't understand that there's days that are going to be better than others, and then they just blast me and my body gets sent into a flare up.

My body, like starts to show more symptoms. So we sit right in that sweet spot of, we're going to push you a little bit, and we're going to push you in the fact that we're I want you to make this a daily method of your operation of your life.

But also we take a very slow and progressive and gradual approach, because you don't want to just skip through programs like the goal of managing symptoms isn't just to complete a program.

You can complete anything, but you can either do it with excellence, or you can just do it to complete it and just check it off your list. My my approach is like we are learning a new movement language.

This is like learning a second language, and it's going to take a lot of practice and a lot of repetition to teach your brain how to do things differently, kind of the same movements, but with a different interpretation of what that means as you're starting to work on things.

So when you come into the gym, we send you to certain videos and it will give you a criteria. And once you meet that criteria, you'll know exactly what program to start it.

Furthermore, like we have an entire section of our membership that is specifically geared towards symptoms. So it's called our it's the heart section, right.

So you'll go in there and there's a library of over 200 videos. And they're categorized by symptoms. So there's a whole section for foot drop. There's a whole section for spasticity.

There's a whole section for balance. There's a whole section for hip flexor strength. There's a whole section for neck pain. There's a whole section for bladder control issues, all that.

So we do deal with the motor. We also deal with the sensory. So I did a whole presentation like a couple months ago on how to improve sensory function in your hands, in your face, how to deal with, you know, with trigeminal neuralgia and optic neuritis and hands that are spastic and stuck, how to deal with closeness, how to deal with numbness and tingling because that's part of the game as well.

So it's not just about coming in and doing an exercise program. We're fully approaching or approaching in a comprehensive manner the different ways that your nervous system works, which is sensory input, motor input, motor integration, and that's going to help you actually feel connected to your exercise, feel capable of doing your exercise, and that's going to make it way more fun and way more satisfying.

So you actually stick to the program. So so yeah. So we've we've really taken a lot of time to, to help people navigate their way, start in the right place so that they, they enjoy this and they're not just frustrated the whole time.

Can we talk about, the success stories? You know, people think, have that mess, maybe for a long time, or just be frightened, that they already see some disability happening.

Do you have some, wonderful stories to inspire people? I do, can we hit pause? Just two seconds. I gotta shut something off in this. In the studio, one of my heaters turned on. I.

So, yeah, I there's been so many there's so many success stories. And it's really cool that, when I go into our members community, like, it doesn't matter what day I go in there with, there's a large variety of people, people that are struggling, people that are asking questions, and there's always a handful of amazing victories.

I mean, just the other day, this this woman was telling me and, I'm working with Doctor Walz on, some programing and some research with working on visual system.

Right. Like optic neuritis thing. This lady went to her optometrist, the other day as a checkup, and she.

How to Start and Navigate the Program

She actually didn't tell him that her eyes have been getting better, like, she she was legally blind in one of her eyes. And she she first got optic neuritis.

She has had pretty much like I was. She says it's like 65, 70% blindness in this eye for the past like eight years. Right. So she really can't see out of her left eye.

She has double vision. She has some nystagmus, which means her eyes bounce up and down when she's trying to focus on things. So she can't really read.

She has problems like, like interacting with people when they move around because her brain just gets all jumbled up when she's when she's trying to track on people.

So she's been, asking great questions. And I've talked to her in our members community. She's reached out to me in what's called our office hours program to ask what the right progression is.

So we gave her a series of drills where she's working on her visual system, her vestibular system, her vagus nerve, like working on integrating and improving her, involuntary motions in her body and then also working on what's called midline stability. So we did a lot of neck work.

We've done a lot of deep core work with breath control. We've done a lot of hip work with her. And, and we've done a lot of strength training with her as well.

So over the past six months, she's slowly been noticing, vision coming back into her left eye. She went to her neurologist, and she had something like a 94% improvement from her last appointment.

And that's from doing the visual drills. That's from doing breath work. That's from eating better. That's from stress reduction, all this kind of stuff.

So she's we're like her eyes are literally becoming non blind, which is incredible. Everyone listen deeply. How many years had she had her visual symptoms.

It was like eight. And it was like it's probably before that. But eight of like all like 770% blindness. So we're certainly told functions once lost, particularly optic neuritis.

They may come back acutely, but eight years later, it's, you know, the, the conventional understanding it does not come back. That is really phenomenal.

Which is why I am so excited to be, starting to do some research with you. This is going to be phenomenal, because then we can have, validated, measures of function at baseline, do the interventions validated measures at the end.

It's going to be so excited. Yeah. Yeah. So that was one of them. You want me to give you another give us a few more? I think that is what is so helpful for people to hear.

Another another story or two. Yeah. So we also had a lady who about, I think she joined like two. It was two years ago, and she was a mom who had a little girl, was like, I think her little girl is three at the time.

And, so, yeah, she's six now. So it was three years ago. And so she came to us and, I actually met her at an Ms. walk that I was at with some of my other members, and she was she was a mess.

I mean, she was in a chair like she was doing the Ms. walk, but she wasn't walking. I mean, she was pushing yourself around. She was having her husband push her.

And this woman, was a was an athlete in her, you know, before she before she kind of went downhill and her symptoms got her. She was an avid runner. She lives in Colorado, so she loved to hike.

She was a soccer player. And she had always hoped to be like a soccer coach for her kids because it was such there were so many good memories of her, like with her mom and dad playing soccer when she was a kid, and she was in tears as she was talking to me, saying like, I can't play with my daughter.

And I've also my husband and I always dreamed of having 2 or 3 children. And like, I'm terrified that if I, if I get pregnant again or if I can get pregnant again, that I'm not going to be able to be the active type of mom and I'm not going to be there for their kids.

And so she's been working really hard. Like every day she's doing some something in the gym, whether it's five minutes or whether it's 35 minutes a day or throughout her day or whatever else.

And then the past three years she came in and she was, I would say, mobility level of like 3 or 4, like she could stand and use a roll later, but not well.

So she slept. That's a walker. Yeah. Walker. Like we I call it a wheely walker. Right. So a roll later, a walker, a weekly walker. So she was doing that to kind of like, drag herself to the bathroom, to the kitchen, to the bed.

But most of her days was spent in her chair. So she spent the past three years going through our programs, you know, really taking her time to learn the movement skills and ask good questions and really tap into the community and everything else.

And, now she is up. She is has no assistive devices anymore. She's playing soccer with her kids. She she just had her, her second child. Right. So she has a six year old, and now she has a little baby.

And so now she she got pregnant. She was able to do that, and now she's. Her pregnancy went great. There was no complications. And now she's up being an active mom again.

She's playing soccer. And she's also set pictures.

Success Stories and Recovery Progress

The other day of her riding a bike for the first time in six years. And I know, Terry, you have pictures of you back on the bike again and there's so much freedom when you go from my body.

Can't even balance walking to riding a bike again and having that sense of freedom. And every and when I saw her, when she rode in, I was just bawling because I'm like, I, I yeah, I remember three years ago how sad you were and scared you were and like, look at you now, you know, and it's it's amazing like it.

So I could go on and on and on and on again. For everyone who's listening, this isn't fast. No, it does take, a commitment. It takes, visualizing that it's possible and wanting to do a little work at it every day and having, a coach and a guide who can assist you with helping you set goals and identifying what are the next steps exactly.

And also being there when when thing, when you have obstacles like this is not a linear progression like Doctor walls and I were just talking about like research isn't linear and healing is like you'll be cruising and then it starts fluctuating and then I'll send you back over here, and then it'll start moving here, and then you're down here and you're over.

Right. And so the main thing is like, you just don't want to stop, right. You will have setbacks. It's just like a child learning or someone starting in a career.

There is a learning curve and it's not linear. You're going to have setbacks. Your brain's going to need some processing time. Stress may build up and you don't even know what's hitting you.

And then wham! It just nails you and you may still have a flare up. You may still have a relapse, but when you have it, when you have a coach and you also have a team, and you also have a community that have been there, done that and can help you through it, it makes it not as scary.

And what what we've seen is that that duration of that flare up and the intensity of that relapse diminishes quite significantly when you know that you have a plan and you know that you have a team behind you to actually walk you through, so you're not doing this on your own, scared and by yourself, what do you think is key for everyone who's listening here?

What are the key things they should be focused on? Number one is you have to you have to figure out why you want to heal. Right? And everybody kind of looks at me like that, and they're like, well, duh.

Like, I don't I don't want to feel like this, but I really want you to think about like, why? Like, how would your life be different if you could use your foot better or you could use your leg better?

And it's not just, well, I just could do the things I want to do. Like where do you get specific and you figure out what you're fighting for or who you're fighting for, whether it is yourself, whether it is your family, whether it's some cause that you want to join again and have the mobility to do so to make an impact in this world, it gives you motivation.

It serves. Is that driving force behind your healing that that gets you up in the morning or that pushes you through those hard days? Or like I've had days to where I'm like, I just want to do this.

I don't want to be responsible for my healing today. And I just wanted to quit, like, honestly. But then I look at my little girls, or I look at my wife and I think about, I still want to be functional and active and like living life with my family when like 25 years from now.

So it gets my butt in this gym, it gets me moving, it gets me focused, it makes me do my breath work in my brain drills and everything else on the days that I don't want to.

So I think having a why is number one, number two is making room in your life. Like carving out that time that you focus on your healing and nobody invades that time, whether it's 8 to 9 every morning because there's no one in the house or whether you're a night owl and it's 630 to 730 after dinner at night, you've got to protect your time so that life does not invade that time that you have set to practice moving, connecting with your body, and really like

putting in the intentional effort to heal.

And then I would say number three is consistency, right? So the most successful people that we have inside the most gym and the most successful clients and athletes I've ever worked with were the most consistent.

Does that mean you have to go work out for three hours a day, every day? Absolutely not. But you do have to feed good movement and good thoughts and good practices, healing lifestyle stuff into your brain and into your life every single day.

And that is going to move you forward like little small steps, successful steps of intentionality and focus done every day will will create a massive cumulative effect in your life.

And I always tell my gym is like smoke or smoke is focus on the small wins, right? You put your pants on today without falling over. That's just as gigantic as walking up a hill with with like unassisted that in my world.

Or ladies like you washing your hair and putting your head back and not feeling like you're going to fall over, or making it through an entire movie with your spouse or significant other, and not having to go to the bathroom five times, or getting to or sleeping all night, or playing with your grandkids one day or something like that, right?

Picking up a sack of dog food and pouring it in the container without falling over like those are gigantic life wins that are absolutely gold medal moments that we celebrate all the time.

And I really want you to focus on those little wins because they add up to gigantic victories. Yeah. Or even just feeding yourself. Yeah. Doing your your pants up by being your own.

But I mean you, the human, you know, these are all very exciting.

Keys to Healing, Resources, and Closing Remarks

Tidbits when you lost them. Like to get that back, like, oh, my God, you know, tremendously exciting. Well and there's a dignity aspect to it, right? It's like it's human dignity.

I mean, that's like the one hardest part that breaks me when I see people that, because of their conditions, have become quote unquote disabled or whatever.

There's this, this human dignity that that is threatened. And I think that when as grown adults, when we we can we can restore and recapture, like, like Terry just said, feeding yourself, putting your pants on, like, go into the bathroom without assistance, like feeling capable and independent and not like you're a burden on someone or like you're in an emergency situation.

Situation all the time restores the dignity of yourself as a human being. And there's like, there's it's priceless. Like there is no price on that period.

I know some of my, people that I've worked with were so thrilled when they were able to go to the toilet and transfer independently again for the first time in years.

And yeah, you know, that that was such a wonderful landmark for them. Yeah, yeah. Now, Ken, can you tell us, what's the one thing you want people to learn, today and then follow up with how we find you?

So I think the biggest thing is, is that. And, I mean, I know it's kind of a catch phrase that a lot of people have heard, but movement truly is. He is it's it's medicine.

But I would I would even take it a step more like intimate is like movement is, is healing. Not just physically but mentally, spiritually, relationally, just just as in your identity, that ability to regain your your ability to move and use your human body to live your life in a way that is not exhausting and threatening and scary and frustrating, is one of

the one of the things that you can have back.

And I know Doctor Wallace can vouch for me because she's seen it over years, is that it is possible to heal. And any of the narratives running around in your head right now that say, this is impossible?

I've tried everything. I'm maybe if this just isn't for me or you don't understand my case. Well, actually, if you talk to either one of us or us combined, we've probably seen someone with a combination of your symptoms.

And we've also seen someone with that combination of your symptoms improve once they actually plugged into the right program, the right structure, the right community, the right coaching, and the right mindset.

So healing is possible for every single person watching this, regardless of how severe things are right now. Absolutely. It may be a long journey. It may be a really long journey, but you can certainly make progress.

Yeah, absolutely. I think you asked me where to find us. So the best place that we have, two websites, one of them is just the THG. So the MSG gym.com.

So the msg.com. That's our main website where you can find out all the stuff about us. You can look at testimonials. There's, there's, links to free exercise guides in there, all that kind of stuff.

And then there's also free PDFs on exercise with MySQL. So exercise with Ms. dot com, that's where all of our free content is. I really have an ethical and professional responsibility to provide as many refreshed free resources as possible to people.

Because I don't feel like you have to pay to play in order to like, explore movement and start to find out that movement is not as scary and threatening and defeating as maybe you think it is right now.

So I want you guys to play around, explore, come in, hang out with us. I do free presentations, three workshops all the time. And then when you're ready to take it up and you're ready to connect and you're ready to take it in a little bit deeper than maybe you progress up and you come work with me a little bit more closely in our membership program.

But that's how you find us. I just want you to come hang out in the MGM universe and see how awesome movement is for you. This is wonderful. And, Ken, thank you so much for being here.

And, you know, I'm so excited that we're going to be research partners. Absolutely. Well, doctor. Well, thank you so much for having me on. It was, it was awesome, as always, to work with you and also to some of you guys that are listening to, to these videos.