Building New Brain Pathways: A Functional Neurology Approach to Alzheimer's Transcript

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Introduction to Functional Neurology and Reversing Alzheimer's

Hello and welcome back to the Reversing Alzheimer's 2.0 summit. I'm one of your host, James Maskell, and I'm super excited for today's guest doctor Garland Glenn has been working with Reversing Alzheimer's for a number of years, bringing together, you know, two of the most effective modalities.

You know, you've heard about Doctor Bredesen's work over the years in this summit, from him and Heather Sandison and others who have been on the cutting edge of that, obviously, Doctor Kristine Burke, my co-host, was one of the six, leaders in the in the recent, placebo control, a randomized control trial.

But there's also this whole world of functional neurology, and that has been led by, in Maine, a group of chiropractors across the country have really started to understand how you can improve the function of the brain with a range of different tools.

And Doctor Garland Glenn is one of the premier doctors, bringing those two worlds together and delivering incredible care to people in the Sarasota area and beyond.

And it's so great to have you here as part of the summit. Thank you very much, James. I am really glad to be here. So I guess maybe we could just start by, you know, tuning in to this area, functional horology, because over the next, you know, over this whole summit, you've heard different ways in which we could sort of do things that relate to Bateson type work.

Right? Identifying the root cause, whether that be bio toxins, toxins, vascular health hormones, you know, cardiovascular health, mitochondria, and and that is something that a number of doctors across the country have been pioneering.

But I think the area that is particularly interesting to me is sort of how you brought that together with functional neurology. So do you want to just give me a little bit of like history of functional neurology and then sort of how how you started to see the synergy of these two modalities.

Sure. What was the functional neurology really began back in the mid 80s with the work of a fellow named, Ted Carrick, Doctor Carrick and doctor. So we would say that Doctor Carrick is the father of functional neurology.

My earlier background is I was a professor of electrical engineering, and so I always looked at things from a circuitry sort of mechanism perspective.

And what doctor Carrick did is he started looking at the way brains were functioning and trying to figure out ways of identifying where the brain was failing, and then how were we going to do something about that?

How are we either going to fix the area that's failing, or how are we going to build new pathways that will take over from where we've lost function? So I use this example quite a bit with my patients.

I've got a pen in my right hand, and if you said I would like to get your name and address so I can send you a Christmas card, well, I like Christmas cards.

So I would have my frontal cortex tell my left motor strip in the parietal lobe to make my right hand write down my name and address. And now, what would happen if I had a stroke right here?

Car wreck? Something like that.

How Functional Neurology Works

I can't do this. So what do I do? I do this now. I have my frontal cortex telling the right side to make my left hand write my name and address. That's functional neurology.

So we see this all the time and we fail to recognize what we're seeing. We see people. They have war injuries or traumatic accidents or things. They lose the ability to walk.

And we see documentaries, feel good movies. They they're on the balance bar. They're learning to walk again. And the movie ends and they're running the local 10-K.

That is neuroplasticity. That is retraining the brain to do something. They've lost the ability to do. And I recognize and so I've been doing this since mid 90s.

I trained with Doctor Carrick when he came to Europe. I practiced in Europe for a long time, and I trained with Doctor Carrick back in the mid 90s. So I've been doing this kind of stuff long before.

There was a recode, but nobody back then was looking at the root causes. Now that's what Doctor Brisson did, is he started to identify metabolic issues that would cause the brain to lose the ability to work.

And so if you take if you eliminate the metabolic cause, whether it's mold or hormonal things and all those sorts of things that the other practitioners will talk about, and then you retrain the brain in how to function again, that takes and puts the two together, and that that's how you integrate functional neurology with the functional medicine recode Bredesen concept that he came up with.

So tell me a little bit about how you've embodied that over the last decade in Sarasota. And, you know, okay, the sort of scale of your impact is being all right.

So much like my colleagues that are doing cognitive decline treatment, we do all the lab testing and things like that where we looking for the root cause.

And like I mentioned, mold mold is a huge thing here in Florida. So I will take and we will identify what the root causes are. Then we'll and we'll be dealing with those with detoxification, blood sugar stabilization and diet and hormones and, and all of those sorts of things.

But at the same time, one of the big things that I do in my office is every patient starts off with a full on neurological exam where I'm evaluating all of their pathways.

So at the same time that I'm fixing the root causes, I will create cognitive exercises in my office. We call them cognitive drills. And that will be what the person has to do every day to rebuild new pathways in their brain.

So for example, this is something that is great for everybody. One of the biggest things that we see in cognitive decline across the board is loss of short term memory.

Big deal. All right. So here's what I do with my patients. And this is something that anybody watching this could take away and use. So I say get a deck of cards.

What you're going to do is find a place in your house that you walked back and forth past multiple times throughout the day. Pull out two cards. Hold them in your hand.

Now why do I want you to do that? Holding the cards in your hand gives you a proprioceptive input to your brain. You're going to look at the cards and you're going to say out loud, so what have we got?

We got visual stimulating the occipital lobe. We're going to say what they are out loud. Ten of diamonds, five of spades. Okay. So now what you've done is you've seen a visual thing, visual memories in here on the right side.

You said a word. Ten diamonds. Whatever it is that brings in the left side, and you've got Meccano receptor movement in the jaw and the motor movement in the tongue and so forth.

And you've got sensory, auditory input into the temporal lobe, which is where memory is. All right. So there's a concept in functional neurology. And that is two things.

Brain Training Drills for Memory

The more the brain fires, the more it lights up okay. So we want to fire is much stuff as we can. And neurons that fire together wire together. So what we're doing now is we're creating new pathways between different parts of the brain.

So I've got proprioceptive input, I've got Meccano receptor input from my jaw and my tongue moving. I've got auditory input from my into my temporal lobe, and I've got visual input into my occipital lobe.

All right. Take those two cards. Ten of diamonds, five of spades. Lay them down. I want you every time you walk past those cards. Say what you think you remember. They are.

Whether you remember or not. You pick them up, you do it again. So that any given day I want you to do that 20, 30 times. It's like playing the piano.

How do you get better at playing the piano? You can buy a piano, but you got to practice. And I can tell you from personal experience that if you only practiced the 30 minutes before your lesson, you will not be very good at playing the piano.

But if you practice every day, multiple times a day, you'll be able to play the piano. So all day long you're doing the playing cards. You get up the next morning, walk over to the cards, see if you remember what they are at night.

Your brain takes short term memory. It converts it into long term memory using the hippocampus and those medial parts of the temporal lobe deep inside.

And whether you're right or wrong, stick those cards in. Pull out two new ones if you will do that the way I've said, you will be surprised. Within a couple of weeks you will start to notice you will have a noticeable improvement in your short term recall.

You want to make it even even more effective. Stand on one foot while you do it. Take some essential oil and rub it on your nose. Gets the more sensory input you have, the more the brain lights up.

That's really cool. So you know, outside. So I can see that, you know, obviously doing tools like that could be part of a brain training process. What does it look like to interact with a functional neurologist, and what is the sort of process that you would take a new patient through who might have, let's say, mild cognitive impairment to see where you might have the most input and impact.

All right. So that that's a that's a great question. When I look at a patient, one of the things that Doctor Carrick taught us in the very beginning is the patient's interview begins when they call to make the appointment, do they call, does somebody else call?

Does their spouse call or a caregiver call or a one of their kids call? All right. Then we send them their intake. And I have patients my intake. You physically fill it out with a pin by hand.

I want to see their handwriting. They come in, I'm interviewing the patient. I'm watching their eyes. How how are they moving? How is their face moving? My questionnaires are such that.

But before I ever sit down with the patient, I've already got a pretty good idea of what's working and what's not working. Then I will use a CNS, SVS.

You know, the central nervous system, vital signs cognitive test, which is a really good test. It's a it's about as comprehensive as you can get in a reasonable amount of time.

I'm going through their paperwork while they're testing. By the time I sit down with the patient, need a knee for the first time? I've already got a really good idea of what's going on, so I'm interviewing them to confirm it.

I'm trying to find the trigger. What happened? Did they have an accident? Did they move house? Did have they, you know, do they live in a moldy house?

Are they diabetic? All of these things, most of the people that do this will go through unless there's a reason not to. I will send them for a volumetric MRI.

I want to see if there is physical shrinkage in any particular part of the brain, because if there is, then I know that I'm probably going to have to develop an exercise or a drill that will get around that area and get to where I need to be.

So it's just like, you know, you get out your GPS and you've got to get somewhere on time and you're looking to see what the traffic is like the way you normally go.

Patient Evaluation and Root-Cause Assessment

So I'm looking so I use that like a GPS for the brain, then I will I've got a pretty good idea of what's going on there. First. Treatment visit with me is a full neurological exam where I'm looking at eye movement.

I'm looking at sensory perception. I'm looking at coordination. I'm looking to see how they're, you know, do they have symmetrical motor function and things like that.

So when I'm doing that, I am starting to put together what part of the brain is working and what part of the brain is not working. Then in my office I have a nutritionist that goes over diet and all of that.

The diet, nutrition, you know, the keto diet, by the way, and in my office, I don't use the word keto because too many cardiologists don't understand it.

And then I get into a tug of war with the patient. So I call it an anti-inflammatory diet. And I've never had anybody's PCP or cardiologists complain about an anti-inflammatory diet.

That sounds pretty good. So we do that while we're waiting for patients labs to come back. And I do. One of the things that that Doctor Carrick taught us is that you examine a patient, you get a really good idea of what's going on.

Then you run the labs. It will prove you're right before you start spending the patient's time and money treating them. So I don't just run the whole lab thing on everybody.

I've got a good idea of what's going on before I start running labs. While we're waiting for the labs to come back, we do all the lifestyle stuff, diet and nutrition.

I've got an, an R in that is record certified. She goes through sleep stress reduction, exercise, physical exercise, not cognitive drill exercises, but how to get your yourself exercising so you can get your brain derived neurotrophic factor up and things like that.

And this brings in another thing about functional neurology. One of the things that is almost universal when you're looking at an MRI report is the radiologist will come back and say that there is evidence of chronic small vessel ischemic change.

Well, of course there is. So what do we know? We know they're having trouble getting blood supply to the cortex okay. Now we've been running around for years chasing blood pressure, not realizing that you have five

extremities.

You've got two legs, two arms. And nobody thinks of it this way. But your head is an extremity, and your arms and your legs have a significant advantage over your head.

And that is gravity. So you've got to pump blood uphill. So one thing I don't want is I don't want people's blood pressure too low. But let's say that you're going to do a treadmill well while you're on the treadmill, not only you're trying to get BDF numbers up and things like that, but you've also got increased oxygenation in the brain.

So what better time would there be for you to do cognitive drills than while you're exercising? So I'll have people while they're exercising count backwards from 100 if that's easy.

Do it by twos. If that's easy, go to threes when you can count backwards by three and you're doing pretty good if you don't want to do that list. This happened just a couple of weeks ago.

I had a woman, she she said, I'm having trouble keeping things in order when I cook, you know, saute the mushrooms before I put the onions in or whatever.

I said, okay, here's what you do when you're exercising. Start with main and list all the states down the eastern seaboard in order. There you go. And when you can do that, list their capitals.

In other words, take the time that you're exercising and exercise your brain at the same time. So that's how I integrate the functional medicine. Recode root cause holes in the roof concept with brain rehabilitation.

Yeah. Give us a little bit of an idea of of what you've been able to achieve. Because I know you've seen hundreds of patients down there at your clinic.

This is your full time gig. You know, what's been your experience of of bringing those two things together and the range of patients that you've been able to help?

Okay. You're right. You're right. This is my only bit. My office. My office only does one thing, and that's cognitive decline. Now, I do occasionally have people come in and they think they're having cognitive problems, but it's not.

So this is all I treat. It's not just a sideline for me. So pretty much in line with the early Recode research and with the precision medicine study that just came out, most of my patients are going to be on a program of somewhere between 8 and 12 months.

So nine months is pretty common. And it's that way because it takes time to get the labs back. So we're fixing lifestyle things while we're waiting for labs.

And then once you start to address your root causes, it takes the brain time to heal. And it doesn't heal as fast as, let's say, you know, scan or something like that.

But we will typically see using, let's say, Moca as a, as a measuring stick, because that's kind of the one that's being used right now.

Treatment Program and Clinical Outcomes

It is very typical for us to see anywhere from a 6 to 8 point score improvement on a Moca test in 8 to 9 months. And when I look at my colleagues that are not integrating sort of the functional neurology side in.

So we're picking up a few points sort of above the, the sort of the average across the country. Yeah, that's what we see. And so we had a felt this is a great one.

I had a fellow now this is this is a bit of an exception, sort of an outlier on the on the top side. Retired attorney. So

you know the guy whether you like attorneys or not.

And I teased with him about that. But you had to have a certain amount of intellect to get through school. He came to see me, his Moca was 17. And that that's in trouble.

That's the bottom edge of mild cognitive impairment. And within nine months we got him to a 28. Wow. That's significant. There's a side of this that you have to you have to consider because it's very different than traditional Western medicine.

And that is the patients involvement is critical. It's like I cannot supplement you out of a bad diet. There isn't a pill I can give you that will make up for not exercising those.

So those I really I drill that in. As a matter of fact, right now, today I'm finishing up a sort of a practice handbook, like you would get a owner's manual with your car that I will be giving to people when they start their program.

That will just help to drive home this idea that this is a partnership effort between the patient and the clinician, or actually and we talked about this yesterday in the mastermind.

It's not just the clinic clinician doing this. It's a team. I have my team. I have my nutritionist, I have my car in. I have a person that is trained specifically in doing cognitive drills.

People will come in and as a part of their visit, I will be using a photo bio modulation helmet to increase blood flow to the brain while they're doing cognitive exercises on a neuro sensory motor integrator screen.

Interactive screen, if you know what I'm what I'm talking about. So it's it's a very integrative thing. It's amazing that, you know, the only thing that has ever reversed cognitive decline is that care team, right eye care team, where you have a clinician, you have a nutritionist, you have maybe dietitian specialist, and then you have the added cognitive training drills. Not everyone has that.

But you know, this really speaks to what does it take to heal a brain. And you know, you're really healing the body. And then that is, you know, bringing back those, those networks.

I'd love for you to share just before we end here. Like, I think there's so much value that you've added here today, but do you have, you know, one other thing, like, I'm sure people are listening to this, they're looking, you know, at some of the ideas that you're sharing.

One other, is there another thing that you can share that is easy for people to do it? I've heard you speak about, you know, exercising your brain when you're exercising the body, you know, learning similar tools like playing the piano to test the memory consistently.

Anything else you want to draw out here? Yeah, I, I have a I have a little saying in my office. My office is an exceedingly optimistic place, and it has to be because of what we're dealing with.

And I tell patients, with few exceptions, if you're above ground and still breathing, there's hope. And if you will start to address the root causes now, you may need some.

You may need some help. Somebody who can run labs and things like that, if you will address the root causes. The brain is exceedingly resilient. And this is where it's different than every other organ.

Your heart is very important, but it does one thing. It pumps. And if the kidneys are in trouble, it can't go over and help out. But in the brain, your brain has the ability.

If most people never get the opportunity anymore, especially even doctors anymore, to actually dissect a brain. But when you look at the tissue in the brain, for the most part, all the different parts look the same.

Brain regions are delineated because of what they do, not because of how they look or what the tissue is like.

Practical Brain Exercises and Closing Remarks

So that is the wonderful thing about the brain is that one part, if you will start to build new pathways, it'll say, you want me to do this, that's cool.

I'll do that. I'm happy to do whatever you ask me to do. The brain is amazingly resilient, if you will just remove the things that are damaging it and teach it how to work.

Again, there's a saying in functional neurology that goes like this. The treatment is what you can't do if you can't have if you don't have short term memory anymore, that's what you do.

If you can't keep left and right, here's another thing somebody could do especially well. First of all, if you wake up the night, you can't fall back to sleep.

That's something we need to work on. But if you're having trouble with sequence, first of all, turn off the GPS unless you really need it to get somewhere.

Go back to remembering how to get from A to B. You don't need the GPS to get to the grocery store. Say it out loud and think about how would I drive from my house to the grocery store and say it out loud?

That helps you put things in sequence in your brain. So if you're having trouble with remembering how to get from A to B, that's the exercise. If you're having trouble with short term memory, that's the treatment you do that drill.

That's great. Yeah I really appreciate that. We'll talk. Thanks so much for sharing all of your wisdom here on the summit. How can people find out more about your work, about your institute and, getting care from you and more about your work that my website is called the Carroll Institute, and that's Corolla Institute that you can go to the Carroll Institute.

There's a link there where you can schedule, first of all, on the on the website, you can find out all about what we do, but there is a link there where you can schedule a free consultation with one of our health coaches, and they know exactly what we do, exactly what we're talking about.

They've talked to hundreds of people and they can help to find out if we're the right place for you. Do we match up and then how to go about moving forward?

That's the best thing to do is to go to the Carroll institute.com. Don't go to the Carroll institute.org because that's a drug rehab place okay. But all the details in the in the notes.

Thank you so much I really appreciate it. I think that, you know, if if you're watching this and listening at home, you know, I know you're concerned about the health of yourself or a loved one as it relates to cognitive decline, getting under the care of a functional neurologist alongside doing some of the healthy behaviors and precision medicine diagnostics associated with, you know, Doctor Burke and this other emerging group of practitioners who are reversing Alzheimer's for the first time, is this way forward.

And, doc, thanks so much for bringing those things together and sharing what's possible. This has been the Reversing Alzheimer's summit. I'm your host, James Maskell. We've been here.

We talked to Garland Glenn you could find out more about him. Please enjoy other sessions today and for the rest of the week. And thanks so much for tuning in, and we'll see you on the next session.