How to Build a Better Brain: Using Spinal Alignment and Mobilization to Boost Brain Function Transcript

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Introduction and Speaker Background

Welcome to the practice upgrade summit. I'm Doctor Dennis, permanent. Our next speaker graduated magna cum laude from Life University in 2011, taking postgraduate neurology courses.

So he earned his neuro diplomat by 2013. Passionate about a multidisciplinary approach to health care. He graduated magna cum latte from Duke University Nursing School and completed a film in Nurse practitioner program at Georgia State University in 2018.

He teaches in the National University Master's Program and is also a certified Functional Medicine Practitioner. He serves on the board of the International Association of Functional Neurology and Rehabilitation, eye author, as well as the Medical Advisory Board for SMA biotech and currently works at Regional Medical Group in Atlanta, Georgia.

This is an extraordinary young man, a master healer and a master educator so early in his career. Please help me. Welcome to the Practice Upgrade Summit.

Doctor Ryan, see you tomorrow. Doctor Ryan, welcome aboard. Hey, thanks so much for having me. So good to see you. Good to see you as well, sir. Now, your talk is called basic receptor based therapies to build a better brain.

What on earth are receptor based therapies? So a receptor based therapy is actually a chiropractic adjustment. So something is as simple as something that we're all very, very good at is is a chiropractor adjustment.

What really, the name just basically means understanding that the brain is a sponge and the brain relies on constant stimulation and feedback from the environment.

So utilizing those receptors that we have to feed the brain, specific information to the brain. So your work is primarily focused on making the brain work better.

How does that actually work? How does chiropractic make the brain work better? So I had my my story of getting into functional neurology, through the Kerrigan's the two hours in school was basically that I had so many questions.

I was I was very new to chiropractic coming in to the program. I didn't have any family members that were chiropractors. I had lots of family friends that were chiropractors, and we talked about one of my classes, how you can make changes to the brain by doing a chiropractic adjustment.

And of course, you've all heard the story of Harvey Lillard, where an adjustment allowed him to be able to hear again. So I kept asking these questions, and I found that those I found that I could find the answers.

Just digging a little bit deeper into, into some of the neurology, especially through those, those advanced courses and, basically, you know, just just getting an understanding of the brain and how we can make changes to the spine, when there's been negative effects to the spine to help the brain understand what's going on in the peripheral, and then also help the system understand how the brain is working.

It just really got me completely intrigued.

Receptor-Based Therapies and Brain Stimulation

And what really happened, and where I, where I started to really look into receptor based therapies as, as a thing,

especially in clinic and, and rehab was when I had a patient who had lost lots of senses.

So I'd love to share that story with you guys. Yeah. Please do, please do, if that's cool. So. Okay, so I was I was working in the clinic and obviously, you know, we start out our exam, through chiropractic we do x rays.

Look at the spine, look for areas of dysfunction and try to make changes, positive changes to the spine to help the brain better. This gentleman, he has an incredible story.

So he came to, to our clinic from Florida in 2011. He was serving, in the military, and he was in, IED technician. So he was he was an EOD technician putting it out IEDs.

So he was over in Afghanistan in 2011. And, he was putting out what he thought was a real IED. And one close by had exploded. So what ended up happening, while he was serving in the military, was that the explosion caused so much trauma and damage to his face that he ended up losing his vision because he lost his eyes.

So within from from 2011 to about 2015, he started to regain a lot of function back. He was doing a lot of physical therapy. He was doing chiropractic therapy to help heal his brain and to help learn how to be functional without his vision.

But unbeknownst to him, he started to develop a bacterial infection, bacterial meningitis. And in 2015, he came down with bacterial meningitis, almost lost his life again, went to the hospital, was in the hospital for several several weeks.

And when he finally came to, he was not only deaf this time, but he was blind as well. I'm sorry. He was not only blind this time, he was also deaf. So this is a gentleman who from, you know, he went from a very, very active, physically fit person in 2011, losing his vision, figuring out how to navigate through life without his vision.

For about four years, he was he was actually navigating his life so well that his vision he took upon himself. He took it upon himself to begin running in marathons, climbing up mountains with guides.

So, you know, like doing all these crazy exceptional things. Even though he lost his eyesight, now you've taken away his, ability to hear. But not only that, the bacterial meningitis, actually, but I call it it chewed away at his vestibular centers.

So he was deaf. He was blind, but he also lost his, sense of balance. And, he significantly lost his proprioceptive input. So he came to our clinic, and I asked him, I said, you know, what can we do for you?

And he told me, I want to be able to run the Boston Marathon again, which was a huge challenge. For anyone, but especially for him. So immediately I'm thinking, all right, like, does he have, like, some low back pain, like, you know, that could that could slow you down in a marathon?

What's going on? And he and his wife, it was his fiancee at the time. They said, you know what? He just he can't go very far without fatiguing quickly because any perturbation when he's running, if there's a misstep, he just it really fatigues him because his balance is so off, he still was able to run short distances with the guide, but he, you know, he couldn't see, he couldn't hear, and his proprioceptive input was completely off.

So that's what led me into really trying to figure out, okay, we've lost. We have we only have so many senses. We've lost 2 or 3 major of this sensory input going into the brain.

What can we do to help build this brain and make it better? From that point on. So it was a it was a cool case study. And, I'd love to keep running you through it there.

Yeah. Don't leave us hanging. You can tell us what you did. Okay.

Military Case Study: Restoring Function After Sensory Loss

So, okay, so obviously, you know, we obviously we worked we worked on chiropractic care, because he did he had a lot of orthopedic injuries, too. You can imagine if your body can't proprioceptive.

We understand where you're where you're if your brain can't understand where your body is in space, it's very difficult to do your normal tasks throughout life.

And he, you know, wanted to become an elite Boston marathoner. So what we had to do is we had to figure out what was working for him and how we can use the plasticity or the neuroplasticity of the brain to try to compensate for those lost areas.

And, you know, before I started working with him, I was kind of blown away by this. I was like, what? You know, what can I do? What can we do as chiropractors that hasn't already been done for him?

And it really just boiled down to the basic, simple things. You know, just remembering that the brain is a sensory sponge and the only way that it can continue to grow and to build and to constantly navigate through its environment is to understand what's going on outside.

So I actually, I did some observation before we started working, and I noticed that, he had he had actually gotten surgically implanted a cochlear implant, that took and he could hear through one year, but he could only hear, very, very, low pitch sounds.

And if there were too many people talking at once, he told me it sounded like a ping pong ball bouncing through a metal room, like everything was just jumbled.

So the way that his wife, fiancee at the time was communicating with him was by drawing letter for a letter, every word in his hand. So she'd spell out things in his hand.

And so I started thinking, well, hey, that's like a test we do in neurology, right? This is the thing we do to check to see how well the parietal lobes are working.

So I started to think, what if we just started using some low level sensory input into the hands, into the field to try to recalibrate the way the brain's working?

Along with our chiropractic adjustments and that's what he did. And I'll tell you, like when you work with, you know, I, I would consider him an elite athlete.

He, you know, he was he was climbing mountains at the time, blind. And now he's he's training for a marathon blind and deaf with really, really bad balance.

So, you know, when you tell an elite athlete like, hey, we're going to, like, just have you standing on a vibration platform, while we, you know, after your adjustment, we'll have you stand on the vibration platform and do some like, you know, low level massage in your hands.

He's like, what are you talking about, dude? Like, let's go out and, you know, go for a ten mile run and you know, my thought with any type of brain trauma or brain degeneration is you got to try to go back to the basics.

So we went as far back. When you look at the way the brain works and, the brain develops, everything kind of develops from the midline or inside out. So in order to be able to really get these primitive centers to work again, we started out with those basic, basic, basic things like working on balance, doing platform exercises on a vibration plate, doing simple things like planks to try to restore some communication between those midline structures, the cerebellum, the vestibular system and the brain.

So it was it was it was pretty cool. And every day we ended up coming to our clinic for a few days in a row because he's coming from out of town. But every day we noticed a little bit of improvement.

And, with his balance and with his with his proprioception. And we finally got to a point, and I have a cool case study on this. If anyone from the Masters Circle group would love to see some videos.

He's just an amazing guy because he would go back to his hotel after a full day of work, and then of course he would like go run and train for the marathon marathon.

So he'd go on the treadmill and do like seven eight mile run and then come back in the next day, like ready to work. He was just so focused and determined.

But we just, we we started out for a full week of doing very, very, very basic sensory input to his brain, to his spine. And then, ultimately we ended up going out for runs, together.

And then he ended up running the Boston Marathon. So it was it was pretty cool. And that's what really drove me into saying, hey, you know, functional neurology and learning the neurology side of things.

You can get pretty complex, but if you always kind of dial it back to some of the simple things, it can it can have a profound impact on the patient's health and healing.

Well, this is an important key that I want our viewers to recognize that, while there is a great complexity to the nerve system, if you start with some basic principles, I followed a lot of technique joints around in my day, and no matter what they presented on stage or their sophisticated advanced work in their offices, they mainly did basic stuff.

And that's because it it's what seems to create the foundation that you can then build on. If it turns out that the person does need something more extreme.

Now, this is this is a very extreme case. Obviously not that many people will come into our offices. I mean, I'm curious, is that how you check the eye?

The eye movements? If the person actually has no eyes, that probably is more difficult. Yeah. Impossible, really. And. Well, yeah, you would think, but I don't know.

You say never. So I suppose maybe something out. But why don't you pick a more garden variety case? Somebody who, comes in that might come in with it into a typical chiropractic office and trace how you use the fundamentals of functional neurology to evaluate what your entry point might be.

What are the first things that you look for? For sure. Yeah. And again, that that was an extreme case. It was just the one that really kind of got my thought process going down the rabbit hole.

And then, like you said, I took I took what I learned there, and I really applied it to every other patient that walked in the door. And I think it's important because as we know, when there is subluxation and there are changes to the spine that can cause disease and dysfunction, it does lead to a nervous system imbalance.

And what I found as one of the most fundamental things of doing functional neurology and neurological rehab is really keeping in the back of our minds that, yes, there's going to be some nervous system dysfunction.

Most likely what I've seen clinically is you're going to see a heightened sympathetic response and some sort of reduced parasympathetic response. And for me, the best way to evaluate that is by looking at vagal nerve function, and utilizing the cranial nerve exam to try to see, hey, is this person more more so in like a fight or flight response, or are they more so in a, in a parasympathetic rest and digest response?

And the majority of the time I'll see it's on the sympathetic fight fight or flight response. So looking at looking at the eyes, when your patient does have eyes and looking for the pupillary changes, in response to light.

So just taking a flashlight, small penlight on your exam and seeing if you do flash a light in their eyes and you see that there is constriction, or if there's not constriction, that could mean that there's some changes in the sympathetic

versus parasympathetic tone.

And what I do with that is I just kind of write it down, and I, I go down the list. But I will say when trying to figure out if they're out of balance or out of whack based on their exam, the big cranial nerves I like to test and check are the trigeminal nerve.

So looking at sensory on the face to see if they have any discrepancy between sides. So as we know you can test the the superficial branches of the trigeminal nerve v1, v2, v3 with simple tests like a pinwheel test or lay brush test.

And if you test one side versus the other, and there's a discrepancy that can mean that there's changes in brain function and changes in sympathetic versus parasympathetic tone.

So I always go to the trigeminal system first, and then I'll work my way down the brainstem into the vagus nerve. And some of the easiest ways to assess the vagus nerve on physical exam are by having the patient do a, palate response.

So just saying, and looking to see if there's changes in, one side versus the other and making sure that the palate raises, symmetrically to a certain extent and then testing gag reflex.

If you're, if you're allowed to do that just to see if the patient has a healthy gag reflex. Because the craziest thing I've seen is that, you know, there's within the world that we live in, especially now with the stress that everyone's going through, is there's a huge lack of what I call a vagal tone, but a lot of people call vagal tone.

And in order to try to get people back to health and, to wellness, really trying to understand how to build that vagus nerve up and build that vagal tone is important.

So making that part of your cranial nerve exam to is, is, I think, very important. And then applying some vagus nerve exercises that are simple and self-guided for patients to do at home can have a profound impact on their healing.

And and also holding their, their adjustments. So give us some examples of those, home vagal exercises that patients can do. Okay. So there's a couple.

So the coolest thing about the brain and I you know, I keep learning more and more about the brain. Doctor Heidi Havoc is doing research on, subluxation based adjustments or doing adjustments to subsections and causing brain changes.

She showed that if you do a chiropractic adjustment, you can make changes to the frontal lobe, which I thought was so cool because as we know, the frontal lobe is a master controller of everything.

And the more I read about the frontal lobe, there's areas in the frontal lobe that communicate directly to the vagus nuclei in the brainstem.

Functional Neurology Exam and Vagus Nerve Assessment

So when we do a chiropractic adjustment, which obviously someone can't do at home by themselves, but when they come in the clinic and just by doing a practice adjustment alone, we're going to impact the front part of the brain, which is going to directly impact communication between the brain and the vagus nerve, which is going to help create more of a balanced vagal tone.

So starting out with some simple stuff, like just doing regular chiropractic adjustments and then moving on to self-guided stuff. So I know this is one that's spoken about a lot, but doing mindfulness or mindfulness meditation practices and incorporating that with your patient care, I think is super duper important.

And it can be something as simple as and I learned this. I have to tell you this, this is a cool story. I learned this

from, spinal surgeon, which is crazy.

But just being mindful of where your body is in space, you take you take several breaks throughout the day. Because if you have a job where you're sitting in a computer and you're typing all day, if your patients are doing that, they're constantly trying to reactivate the sympathetic nervous system and change that vagal tone.

So closing your eyes for about 15 seconds, taking a deep breath and just noticing where your body is in space, feeling your shoulders, dropping your shoulders, feeling your feet and focusing on your toes hitting the ground.

Something as simple as that can actually increase mindfulness activity, change your vagal tone, and increase vagus nerve activity as well. But then also, you know, trying to do some sort of meditation and on a daily basis because as we know, neuroplasticity, repetition is the language of the brain.

And your brain is going to get really efficient at what you do every single day. And that's a good thing or bad thing. Sometimes we get stuck in these bad habits, and that just becomes something where our body becomes smarter than our mind, and we do it without thinking.

So if you can try to coach your patients into doing some sort of mindfulness, mindfulness meditation, or just like a five minute meditation practice every day, that can really build vagal tone.

And I found it just really helps with overall health and well-being. But the spinal surgeon, I got to tell you about this. So I was, I was doing my nurse practitioner rotations at a functional medicine clinic with, with a medical doctor who just only did functional medicine.

So we had a great relationship. She would actually refer patients on the chiropractic side and vice versa. But she had a book in her waiting room and the name of the book was called Back in Control.

And it's by a spinal surgeon who is practicing out in, Seattle. His name is David Hanscom, and he basically he wrote the book, because what he noticed was by incorporating these vagus nerve activities and exercises, he had patients that had structural pathology of the spine, so significant herniations and he would actually do surgery on patients who had failed surgeries.

So he would he would do the surgery on patients who had a surgery, and they just didn't get better. And what he found was that he began incorporating, a program that he created.

It's basically neurology and neuro rehab exercises with a focus on vagus nerve exercises called the direct your own care. Exercises. And he found that when he had his patients go through these self-guided rehab for, at least 4 to 6 weeks before their plan for their surgery, the majority of their patients would drop out of surgery because they weren't in pain anymore.

So it was it was just super cool. I ended up reading his book, and I got all these great ideas for for our chiropractic patients as well, because I just think it's something that everyone should incorporate.

So mindfulness, doing simple meditation exercises. He talks about doing something called expressive writing. Have you ever are you familiar with expressive right.

No I'm not. Tell us what that is. So it's something used in in the world of psychiatry and psychology. But he, he ended up using it for chronic pain patients because the majority of his lumbar surgery patients were chronic pain patients.

And expressive writing is basically taking your thoughts and just putting them onto paper and whatever you're thinking, because we have thousands and thousands of thoughts a day.

But taking those thoughts, putting them down to paper, just writing, writing, writing. And then as soon as you're done writing, whatever your thought, as you tear off the paper and throw it out.

And what he found was that when he started utilizing expressive writing in his practice, a lot of his chronic pain patients were getting out of chronic pain.

And, there's actually a ton of research on expressive writing, and how effective it is, on the brain and changing plasticity of the brain. So when I started doing was just having, you know, because the majority of my patients come in with usually it's like chronic pain from, brain injury or headaches.

Headaches is a major, major complaint or low back pain. So I'd say I'd have them do that just every morning. You take ten minutes, you get a little thick notepad and you just write down your thoughts, tear it up, throw it away, write down your thoughts, tear it up. Today.

It doesn't matter what your thoughts are, but that's the that's the essence of essential, of expressive writing. And I've just found it to be so effective.

I started using it on myself. And it works in so many different, aspects of your life, whether it's you have anxiety, you have stress, you have pain. It just seems to really balance out the nervous system in a really cool way.

So expressive writing is one of them. And then just one more, I think, a lot of the functional neurology people that, that are in the group know is doing exercises to actually stimulate the muscles that are innervated by the vagus nerve.

So having your patients doing simple exercises like gargling water, humming, singing, chanting, at home, you know, my wife loves it when I sing in the shower.

I'm saying, but but doing, like, singing anything to activate that posterior group of muscles in your throat because they're going to directly talk to the vagus nuclei in the brainstem, and that's going to increase communication between the brain and the guy.

So something as simple as that. And then most interestingly, there's so much research on this now, and as chiropractors we do this all the time. But there's something called transcutaneous vagal nerve stimulation, which long story short, it's just basically stimulating areas of the vagus nerve.

And one of the areas that's, innervated by the vagus nerve is the irregular branch of the vagus nerve, which is in the outer ear. So they're using, simple tools like tens units with ear clips, vibration tools on the ear, or even low level laser therapy on areas of the hair.

Like specific acupuncture points of the ear to stimulate vagus to increase vagal tone. It's just it's pretty cool stuff. I, I worked in the hospital for three years after, chiropractic.

And obviously, you know, you see patients in the treatment, you're like, hey, there's got to be like a better way. And one of the things was, those implanted vagal nerve stimulators, which they do play a role to some extent.

But if we could access that by doing, you know, simple chiropractic treatments and therapies within office and then have the patients do them at home to help them build a better brain, why not?

Great stuff, Doctor Ryan. Great stuff. You know, your students are very fortunate because you have such a, easygoing style that you're presenting very deep and complicated concepts, and you have such a nice charm, a nice, easy way of presenting this.

It makes it very easy to learn. I'm sure, our viewers are getting a lot out of this. I want to shift gears a little bit. This is an among the craziest times that any of us can ever remember.

I'm. I'm an old man. Compared to. I'm probably twice your age, and I can't remember anything like this either. What are what are you noticing in patients?

What are some patterns and rhythms you're noticing in patients not only in response to Covid 19, but in response to the whole presence of the pandemic?

What are you noticing in people and what kinds of things are you doing to help them? Oh, man, I know, like, when this all started, I never thought it would be as long as it has been.

And it's it's just been it's been rough. It's been a mess.

Home Vagal Exercises and Neuroplastic Rehab

And so I think the biggest thing I've noticed, there's there's a huge level of uncertainty and, like, you know, what's going to happen? Where are we going to go with this?

What is the world going to be like in the next couple of months? I've seen, just in my practice on really increased levels of stress. So our, our focus has really been on just trying to discuss stress, the implications of stress on the body and, and on the brain and stress reduction exercises to help with this.

Because, you know, I've just like like you said, I've never seen anything like this. I have a two and a half year old at home. We have another boy on the way.

And it really does scare me for what the world is going to be like in the next few months, years. Because not only is it stressful, the uncertainty of all this is not just stressful, but just the social isolation.

It sucks. Like like, I mean, to be able to not to not be able to do this in person. I've met the group. I've spoken at the group in person, and people at the group are awesome.

Being able to give people hugs, high fives, like, you know, I, I just want to give somebody like a 22nd hug, you know, you miss that. But I think the, the biggest thing is, trying trying to trying to help people and encourage people to look past this and not not to not to just put it to the side or forget about it, but to focus on where we want to go.

I think that's really important. And also just focusing on ways that we can kind of check ourselves about the stress levels because, you know, I, I always, I always tell patients, you're your brain.

It's almost like every day you've got to kind of navigate your brain to where it wants to go. It's just like if you're going to set sail on a ship, if you don't have a map of where you want to go, you know, you could end up in the middle of the ocean.

So getting getting your day started by writing down your goals. And this, this is the same for any chiropractor or any any anyone working with people to help people you know, writing down your goals, writing down your ambitions.

And then also, this is what I do every morning. I do ten goals that I have short, long term and then ten, things I'm grateful for past, present and future.

And I've learned this from other people in the group, and it's just help my brain stay focused on, navigating these treacherous waters to be able to stay focused on where I want to go, what I want to do and who I want to be and how I want to help people.

So I do think that's important. So I know I'm rambling, but if you on the country, this is so valuable again. Yeah, it's just because something is simple doesn't mean it's not profound.

In fact, the most profound things typically are simple. We just have to be deep enough to understand that. Yeah. So and so. So you're so the the rhythms.

You're talking about the habit patterns that you are recommending to people to do that makes a lot of sense. Talk a little bit about the neurological foundation of that.

What are you noticing is going on in people's brain and in people's neurology that's causing these aberrant patterns that responds to something like, gratitude or writing today's goals or having a certain direction.

So, yeah, I think, the I've noticed a shift. So at first when, when this all started happening, I think there was, you know, a few weeks or months where I was just like, okay, kind of cool, whatever, whatever.

But then job layoffs started happening. The the uncertainty continued to rise, so stress levels continued to rise. So what I first did was try to focus on, hey, what are the physiological effects of stress, not only on the brain but on the body.

And as we mentioned earlier, the front part of the brain is our master controller, the frontal cortex. What I've learned about stress and I've read this in tons of papers.

When we have a heightened stress response, it's going to slowly neuroplasticity start to structurally change our frontal lobe and functionally change our frontal lobe so that we we lose that regulation.

So what I tell patients, you know, or our family members or anyone, when we notice that we're stressed out or we're short tempered, we've got to take a little bit of a step back because we're not we're letting the stress kind of we're becoming more reactive to the event as opposed to trying to be proactive and control things with the front part of our brain.

So in order to be able to shut down the stress, I started to say, hey, we gotta use these things to focus on, one of the big things was looking at the nervous system, trying to balance out sympathetic versus parasympathetic, really focusing on vagus nerve, exercises just to try to create more of a wholesome vagal tone.

And then also, you know, working on, goal setting because goal setting has been directly associated with increased, firing in the frontal cortex and, and gratitude, not tons of research on gratitude, but I know it works because it's worked for me and it's worked for tons of patients.

And what I've seen is that, you know, when we start to take our our focus away from the negativity and we start to focus on a little bit more of the positive things, not to say everything's rainbow and butterflies, we just to try to focus on where we want to go, who we want to be, what we want to do, and focus on what we're grateful for and what we have now.

It really, really changes the way that we're able to perceive our environment, and our ability to not react as reactively to the environment. So, you know, go to the chiropractor, get adjusted because we can still do that.

And it is it is really important, because that can help make the frontal lobe better. Stress reduction exercises, gratitude, goal setting vagal nerve exercises.

And then also in these weird, crazy times where you're not going out as much. When I recommended to patients and to friends and family is find a new hobby.

So, you know, I mean, there are things that you can do at home. You know, either whether it's, you know, finding someone that you really enjoy reading their books, like a really good author, finding a new subject that you want to learn within your profession.

COVID Stress, Gratitude, and Daily Brain Habits

I, I wanted to learn more about, like, musculoskeletal and orthopedic injuries. So I picked up a new book on understanding that. And then also, a pleasurable hobby that kind of makes you happy.

And I always tell patients and family members and friends, find something that you're not good at, that you've always wanted to be good at because your brain changes on a daily basis, and you can get good at something the more you practice it over time.

And it's fun and it's engaging and it takes you away from where you are. Cool. That's a that is a list that anybody can do and everybody will benefit from.

Doctor. Right? Yeah. I haven't mentioned much about chemical stress. Do you get involved with nutrition or detoxification. Do you do that in your clinic?

Yeah, 100%. I think the nutrition part of it, I think is super duper important. Part of the nutrition part I found is, you know, taking away the things that are pro-inflammatory and causing the chemical stress and then adding in the things that are going to help kind of, reestablish normalcy in the environment and then also increase, or decrease the chances of getting more chemical stress.

But the one thing I've also known is to, is the coolest thing about the neurology in the rehab is if we can find ways to stimulate the vagus nerve, you can increase the efficacy of the nutrition and of of reducing the chemical stress.

So what I tell patients is you can't build plasticity through a pillar powder. And and what I mean by that is when you're looking at changing the cellular and the chemical environment, we need oxygen, we need glucose and we need stimulation.

If you just put oxygen and you just put glucose in so good nutrition, making sure you're breathing healthy air, if you don't add in the stimulation there, there isn't a ton of room for building those growth factors in the brain.

In the body. So yes, nutrition is 100% important, especially during these rough times, because I think during these rough times, it's easy for patients and not once to get into bad habits.

You know, like the world's ending. Who cares? Let's eat like 13 cheeseburgers today. How busy? You know, you don't know. So you're like, all right. I mean, I can't blame you.

Like I always, you know, if you want to always, always want to try a couple of Big Macs. Cool. Like, you know, shifting your focus and saying, you know what, what what can you do every day?

The goal for me with all of our patients is to try to tip the scale like there's always going to be some environmental and chemical and nutritional stressors in our in our life.

But if we can tip the scales and do something a little bit better for us, then it's really important. So yeah, long story short, nutrition super duper important.

I do think, though, that making sure that people aren't eating the foods that are triggering, bad responses, adding in good things to mitigate it, but then also doing some neuro exercises like bagel nerve exercises, to enhance that brain gut, gut brain communication.

It's also really important. What are some of the typical transgressions? What what are some of the offending foods, that people eat? And what are some of the counteracting, recommendations you make in the neurology world?

One of the big ones that we've just noticed, especially because we'll start to dive in. Well, what I should say is the brain is only going to be as healthy as the internal environment, the rest of the environment, because we have the barrier system.

So you have the blood brain barrier or the gut barrier. So one thing I've noticed that, and I know a lot of people know this, that has caused disruption in the barrier systems.

The brain blood brain barrier and the gut brain barrier is gluten. So, you know, we products that are just there, anything that's on the shelf that's got we anything that that's on the shelf that has soy in it, anything on the shelf that has, milk proteins like casein in it.

Those are really large molecules that can be very disruptive to our barrier systems. And when there's a leakage in

the barrier systems, you're going to you can you can get persistent inflammation within the system.

So what I what I always tell patients is if you are symptomatic let's just try taking those away. And it's actually it can be very difficult for patients because the foods can be very addictive.

We have these receptors in our brain and in our body. They're called video morphine and Co morphine receptors. So we almost become addicted to these proteins and we don't know it.

But removing those big triggers you know, and then just starting to add in some natural natural foods and then it can get crazy. Like, you know, I know there's a lot of people in the group that do functional medicine testing, but sometimes you're eating foods that we don't even know that we have, immune responses to that we do.

So sometimes getting a blood test is and isn't the worst thing ever. But I always try to start with the simple stuff like, let's eliminate some of these commonly known allergens and go from there.

Very sensible, very sensible indeed. Now, Ryan, you're at the front end of what will certainly be an extraordinary career. You're already putting some, a significant imprint on your ideas on the, chiropractic marketplace.

I'm really curious. Where do you see the profession heading? And what can you foresee? And chiropractic future? Oh, man. That's a good question. I, I mean, I just, I think that, you know, I think the more we see, I think people are waking up.

I guess it's hard to say. When I first got out of school in 2011, the conversations that had with patients, it was very difficult, to to even with my parents, you know, they grew up in this conventional mindset, of where, you know, if you have this, take this for this, as opposed to promoting healthy lifestyles, living and, and doing things of that nature.

So, you know, I, I see you, I see some really, really good things happening for, for the chiropractic profession. But I also see so much potential in it too.

You know, there's there's a lot of patients that don't go to the chiropractor, don't know what chiropractic is.

Nutrition, Inflammation, and Chiropractic's Future

So I think like educate, we have to educate a little bit more on what we can do as primary care providers to promote health and well-being. Because, you know, I've, I've seen I've actually learned, you know, as a nurse practitioner, I've learned what the conventional side of things does and do in their mindset.

And it's completely different. Our definitions of holistic health are completely different, between conventional and, chiropractic care. So I think that we're going to do some really amazing things.

But education is one of the most important things. And just, you know, being reachable sometimes patients are they just have it ingrained, especially in the society we live in.

I call it the convenience of conventional medicine. We have this mindset in green where there's a quick fix for everything. If I order it today should be here tonight.

You know, everything's so fast paced. But, you know, to really develop a good brain and body to make changes that are positive and long lasting, you've got to do things on a daily basis to stay healthy.

So I think educating the patients is important, but I do I also do I'm kind of bias in this, but I do feel that neurology plays a role because I've just seen I mean, I've seen some amazing cases like the one I just, I told you guys about where they'd been to everyone and they never got help.

And it was some simple stuff with chiropractic treatment that totally changed the course of their life. So I think

neurology plays a role in it. But, you know, I think the I think the world's grabbing onto to what we do.

Well, you know, I mean, all started with brain started tissue cells. So, it's not hard to scratch that. Neurology should be a centerpiece of this. But what I admire about your approach is that you integrate a variety of different other supplemental, ideas and, and mechanisms in order to be able to create the most complete response to the patient.

And, this is, this is one of the gifts that you and your generation chiropractic will give to the world. There'll be less enmity, less fighting, more camaraderie, more pooled resources.

And I think that this is an opportunity for all of us to learn and grow through that. Doctor Ryan, you've got the ear of the profession. What encouragement or what comments would you make in order to inspire young practitioners to follow a path similar to yours?

For for any students? Do we have a lot of students within this group as well, or just young practitioners? You have to hope. Awesome. Well, you know, for the students out there, for me, school, I never I never found direction and in within school until I found what I exactly wanted to do.

So I spent the first few quarters we, we went to school and quarters really trying to join groups, and join clubs that, that really resonated with me, that made me want to sit in class and learn what we were supposed to learn for boards and figure out how to apply that in the clinical setting.

And for me, that was neurology. But what I, what I encourage students to do is to really get in there and find what resonates with you most with chiropractic, because whatever resonates with you most, that's going to make you want to learn more and you're going to help your patients out.

I think, tremendously when you get out in real practice and for people practicing, you know, I think finding your passion, within chiropractic, knowing that what you're doing is something that no one else can do.

And the knowledge that you have from chiropractic school, we, we learned so much in chiropractic school and, just being able to apply that to the patient and educate the patient, teach the patient and help bring up these just healthier paths of people all around the world and stay connected and stay, you know, keep communicating with each other because we need more holistic, practitioners out there doing good work and making brains better because our brains are challenged and beat up every day.

So the more we have of everyone passionate about what they're doing, kicking butt in practice and helping people, the better we're going to be, well, that is the vision we can all aspire to.

Doctor Ryan, a rising star in chiropractic, a visionary leader in the making, a master healer, master educator. Doctor Ryan. Mark, thanks for being on the Practice Upgrade Summit.

Thank you so much for having me.