# Why Your Brain Can Shrink with Chronic Headaches Transcript

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## Introduction to Dr. Barrett

You know, we can't talk about the brain without addressing headaches right now. I'm going to introduce something very special. Doctor Amelia Scott Barrett.

She's a Stanford trained neurologist who teaches the latest brain science to people with headaches. And this information really empowers people to really get the most effective tools for headaches, but also change their lives by utilizing these tools over a lifelong journey to really revealed how the brain can heal and how the head can heal as well.

Doctor Barrett graduated from, from Smith College with the honors in psychology and attended the University of Colorado School of Medicine. She completed her residency at Stanford University and returned home to Colorado, where she founded Rocky Mountain Neurology, and she continues to see people with headaches.

She founded the Migraine Relief Code in 2019 with the mission to really help people chronic headaches get their lives back. But the Barrett lives in Denver and has three beautiful children in high school and college.

She enjoys yoga and cooking and meeting new people. What we're going to cover today is something that I think everyone should really learn and understand.

All the topics that we go over today is something that I practice myself with my family and my friends as well. I can't wait for you to hear Doctor Barrett talk about this.

I'm so excited to have you on. This is amazing. So welcome to the show. Thank you. It's a pleasure to be here. So, you know, I was, on your website earlier, and one of the things that really stood out to me and really resonated to me is that a lot of people have had to just take medications, cover them up, like, why?

Why not just do that and get on with life? What's up with that? Well, I think that approach works great if you have like a couple headaches a month. But, you know, I'm a neurologist.

Those aren't the people I see. So the people I see are having more like a couple of headaches a week.

## Why Frequent Headaches Change the Brain

And the problem that we get into is that when the headaches are that frequent, the brain itself starts to change so that even when you're not having a headache, your brain is firing differently than the brain of someone who's only having 1 or 2 headaches a month or who doesn't get any.

So that is really the problem right there. And so what we see happen is that people are getting a couple headaches a week. They're taking medication to make it go away, but their brain is still changing.

It's honestly a little bit like when you learn to play the piano or something like that. You know, you you keep practicing over, over, and then you get really good at it.

It's the same if your brain keeps practicing having headaches over and over. It gets really good at it. It starts to wire the genetics, start to make all those proteins and enzymes and and that turns into its own problems.

So this all sort of, comes up for me because I'm seeing people where the medications just aren't working anymore. So that's a big factor. Or they, take medications, but they get side effects.

So that's a factor too. And the reason usually that the medication stop working for them is because their brain is

actually starting to change. Right.

And one of the, the most interesting things in my practice, and I look at EEGs and quantitative EEGs all day long. So, most of the patients that I see, I have their schedule before me before I even step into the room and meet them for the first time.

So. Wow. And then I'm then one of the first things that I come up with that I look at, with these patients after I look at their, the brain mapping, is the way and, usually when I, when I walk into the to the room, they have to turn around to look at me.

So a lot of people are, like, doing this. And so that's one of the things I observe because whenever I see someone like that, their brain fires, on batteries in super high firing frequencies.

So I'm like, I bet you this person has headaches, or I bet you this person has chronic pain. And I bet it's been going on for years because it's just stuck.

You can see that on the EEG. So what you just said really resonated with me is the fact that the brain's physiology is so different. And it's not like headaches and brain are two separate things.

We're all connected together. So that's that's amazing, you know. Yeah, yeah. And, you know, even with functional MRI, so many other tools we have these days have really it's a, it's a, a bunch of convergent data all pointing in the same direction.

Yeah. So, one of the other talks in the summit, we actually discussed how chronic pain, especially headaches, affects relationships and what I often find.

And maybe you, as well with your patients is that, relationships really start to suffer, and people feel really isolated because the pain and headaches.

Do you find that to be true for a lot of patients? Absolutely. And and, you know, part of what's going on with that is that the underlying structure of the brain is changing.

It makes people have more brain fog. It makes people have more anxiety, more depression, poor quality sleep. You know, these are all of the other symptoms that start to go along with the headaches.

When those pain pathways start to, become damaged, almost, you know, it's reversible that, like, damage in air quotes as a result of living with that chronic pain.

And. Yeah, we see that in relationships for sure. Yeah. So we shouldn't be relying on pills all the time. Like what? What do we do. How do we how do we figure this out.

So I think that this is actually a massively under-recognized area in conventional medicine. And, part of my mission is to definitely raise awareness, so that people understand that taking pills a couple of days a week is not it's not no big deal.

I, you know, I have people come into my office all the time who are like, yeah, I have headaches ten, 15 days a month, which is fine. I take my medicine, I power through, I take my kids to soccer, I still go to work.

I have to do things five times, but I still get my stuff done, you know? And there it's almost like there's not, a validation that that, that that's not okay.

## Brain Mapping, EEGs, and Chronic Pain Patterns

That's not optimal. That's not where we want to be. And so I, I think it starts with letting people know, you know, through venues like what you're doing that, that that's not what we're shooting for.

There's stuff going on under the surface when we, you know, lift the hood and take a peek that really needs to be fixed. So I think awareness is absolutely the first step that if you're living in that state, things could be so much better for you.

So what what are the like the most common causes you see for these, like, unrelenting headaches? You know, there are so many, I think that there are a lot of nutrient deficiencies out there that are contributing to headaches.

So I think it's important to figure those out. And for many people, there can be toxins accumulating in the body, many people with migraines that have mutations in their detox pathways.

And so they're just more susceptible to all of the toxins in our world. Some of them are things we've heard of, like mercury or things like that. Some of that, I think honestly hasn't been figured out yet.

But when we detox people, they start feeling amazing. And then I think that, you know, they a lot of times it is this problem that the brain has become rewired because of the chronic pain.

And so just to like an analogy about how this works, that we've learned from functional MRI, I like to think of the brain as a symphony. Okay. And so you've got the conductor and then you've got all the other different areas of the brain, you know, the percussion and the strings, etc..

And what we see on functional MRI is that the, conductor parts of the brain are gone. The conductors out to lunch, they're those parts of the brain are under firing.

They eventually become smaller. And our job is to help people via those circuits, start rewiring those circuits. So neurons that fire together, wire together, and eventually those parts of the brain start to come back online.

And then they start to grow in size and then we can help normalize the pain pathways. And so oftentimes that's part of the issue grow in size. You're saying like parts of the brain can actually grow or the function can actually grow.

Yep. Absolutely. So and this is something, you know, that's newer in terms of our understanding of how the brain works. It's part of the neuroscience that has come about in the last couple of decades.

That really helps us understand what it is that's going wrong in the brain and how we heal it. I think that, you know, when we fall down and skin our knee, it's super obvious that the knee heals.

The brain is just a little more hidden in here, right? We needed more tools to figure out how the brain really heals. But yes, absolutely. When neurons fire together, they wired together.

The connections become more dense between the neurons.

## Headaches, Relationships, and Daily Function

You know, if you can imagine maybe two neurons connected like this, they'll become connected like this as you definitely fire. Yeah, they fire those circuits and then when you bring the conductor back online, then the conductor can like organize, okay, percussion, you do this strings, you do this, you know, and then the whole brain is operating the way it was intended to.

So you really can bring those parts of the brain back online through conscious intention, very targeted types of things. But it is possible, to do that and rewire back to a healthier place.

That's amazing. You know, another part of the summit, I interviewed Doctor Bruce Wexler, who coined this term, brain Systems and the publication in 1986, when he was, Yale or Harvard, I can't remember.

And so he talked about these sort of brain systems and working together. Sounds like the symphony that you're talking about. You know, it's not like 1 or 2 neurons, you know, it's really an entire system.

And we have to really address the entire system from a holistic process. For, for that's really yours. That's beautiful. You know. Yeah. Yeah. So how important here's a here's my, here's my thing.

You know, I see a lot of people and not just patients, but my family, especially my family, actually, who kind of have this understanding. Their headaches are just headaches.

They're going to put up with their brain and to power through the day. And that, and that if someone has a headache, you know, a lot of people that are the color in my family just kind of hide it and go to a dark room for a little bit, and I'll power through.

And I don't feel like that's really spoken out loud, even within family systems. And I'm sure someone has spoken a lot within their friends. People don't like to talk about headaches.

Why do you think that is? Well, I think that that that is complicated. I think that on the one hand, there is sort of a dismissive attitude about headaches in our society and, and and absolutely that idea, you know, just put up with it, power through it, take a pill and go do what you need to do.

And then, you know, the vast majority of headache sufferers are women. And so a lot of times that's, you know, I still need you to get dinner on the table.

I still need you to get to the grocery store. I still need you to, you know, keep up with the social plans, you know, and I'm I'm I'm saying it as if somebody else is speaking to them.

But I think women do this to themselves. Also, we are expected to be caretakers.

## Common Causes and the Brain Symphony Model

It is, part of what we what we do and love to do. But also there's so I think that there, you know, a couple of different things happen. Number one, everybody thinks it's no big deal.

Number two, we push ourselves really hard to continue giving to our children, our jobs, our husbands, our families, our partners, you know, whatever it is.

And so those two are pretty strong factors that result in people downplaying the impact of the headaches on their lives. Yeah, I totally agree with that. Yeah.

Let's let's talk about the different types of headaches because I think, headaches is one giant category. But a lot of let's start with migraines. How are migraines different from other types of headaches and what are the classifications, you think? Yeah.

So migraines, you know, are defined as generally one sided headaches associated with nausea or vomiting, light sensitivity, sound sensitivity. They tend to last between 4 and 72 hours.

Cause, you know, those are sort of our diagnostic criteria. And, you know, I think really there are lumps and splitters in in medicine. You know, people kind of try to put everything into one category, and then people who try to split it out into a bunch of different definitions.

I'm definitely a lumper. I see chronic headaches as being a lot of the same circuits and problems going on in the brain, regardless of whether it's started off as migraine or attention headache.

And just, you know, for the purposes of clarifying the definition of tension, headache is typically both sides, often a band around the head. You don't tend to get that nausea or vomiting, light sensitivity or sound sensitivity, you know, tends to come on at the end of the day.

They're typically shorter, less severe, than migraines are. But I think regardless of what the headache type is, what

matters really is the frequency and the impact on your life.

And if they're getting more frequent and they're starting to make it so you can't do the things you want to do, that's when bells need to go off in your head and say, whoa, whoa, I need to go do something about this.

So for me, frequency and severity matters almost just as much as you know, what is it that's causing it? I mean, excluding things like brain tumors, of course, you know, you need to go to your doctor and figure that out.

But, you know, once the biggies have been excluded, I think the the big drivers of the changes in the brain are really the frequency and severity. Right? Absolutely.

And a lot of people listening to this have have been the doctors then they've probably even had MRI and it was negative in the last few scans. Right. And so because of that here, we know it's not the tumor, but we don't know exactly what it is.

And that kind of ended up, you know, watching our show here. Yeah. Yeah. Thank you. Glad to have you here. Same. So here's the thing. You know, I think that you're right, about the lumper and splitters.

So I'm, I'm also a guy kind of lump things in. And I think part of the reason is because you and I both believe in what you call the symphony analogy.

Right? Hey, the strings are out of tune. It's not like there's a violin that's that's missing. The strings are. That's in this whole section. Right? So the entire section is out of tune.

And so as we look at headaches and one of the reason, you know, in medicine that we split things into different categories. One is data collection. And two is targeting pharmaceuticals for FDA approval.

Right. And so a lot of the splitting into different sections is designated for a specific diagnosis for a specific drug that can go under development in a clinical trials, you know, one, two, three, four and then develop a drug.

So some like, you know, pharmacology University of Houston. So that's that's sort of the discussion behind that. Right. And then but from a holistic standpoint, if the brain is wiring in a particular way, it can precipitate migraines.

It can precipitate tension headaches that can precipitate cluster headaches and whatever things that we want to split into. Right. And so let's talk about the similarities between them.

And one of the things that we mentioned in the previous talk is something called the lymphatics, that we've kind of introduced this concept. Can you talk about how the facts really relate to headaches?

Oh, I would love to. All right. So the Glenn Paddock system was discovered in the space of my career. So this is a brand new concept in neuroscience that is incredibly important for those of us with chronic headaches to understand.

I think that everybody who has migraines or frequent headaches understands intuitively the link between sleep and headache. If we don't sleep well, we are much more likely to get a headache the following day.

If we have a headache, sleep will often take it away. And here's why. So any kind of headache, migraine in particular shuts down the lymphatics. This is incredibly important for people to know.

It shuts down the Glenn Paddocks. Now the lymphatics are like the trash truck of your brain. It is clearing out all the inflammation, all the beta amyloid, all the other byproducts of metabolism in your brain.

Your brain takes up 20% of your energy.

## Lymphatics, Sleep, and Brain Cleanup

There's a lot going on up here. It needs a really good trash truck. And if you're having headaches, it shuts down your lymphatics. The lymphatics kick in and kind of go into high gear at night to help clear out your brain.

So that's why, number one, if you're noticing a link with sleep and headaches, it could be because you need that lymphatic clearance to get rid of all the trash in your brain.

And number two, it's more pronounced for people who are having headaches because they're shut down part of the time. So that stuff builds up more. You need that sleep even more to be able to clear everything out.

So that I think is really, really important for people to understand. You know, we live in a culture where people brag about, oh, I only need five hours of sleep or whatever, but, you know, we've done very detailed studies and those people are just full on themselves now, you know, when you do sophisticated testing on them, they're basically performing like drunk drivers.

You know, it's not not a good thing to miss out on your sleep. Why are the facts only, surrounding the brain? Well, as we conceive of them with regards to clearing the trash trucks out of the brain. Yeah.

So they come in, fluid comes in along the outside of the arteries. Arteries bring blood. Blood in it washes across the brain tissue and sweeps away all the toxins and then drains out on the outside of the veins.

Which is why it was so tricky to find them. Because it's not a whole separate structure like the lymphatics in the rest of the body. Which clears stuff out of it like it's its own separate structure.

You can see it. The lymphatics aren't. It's not that way. We had now have sophisticated tools and we're able to see it. And now we're just starting to understand it.

So it's related to but different from. And it was harder to find. And I guess there's no medicines that can clear the goal and Fedex or anything, right.

Nope. Absolutely not. Yeah. Theoretically what could be happening on as people kind of cover up these symptoms with medicines over a long period of time, they're gone.

Fedex can get really backed up. Now. There's a whole lot of trash going on in the brain. Right. And those toxins build up and eventually they turn into new autism, diseases, you know, Alzheimer's and etc., etc., right? Yes.

And you raise a really important point, like headaches aren't the only outcome of all the trash building up in your brain. There is a clear link with Alzheimer's and the accumulation of beta amyloid and disruption of lymphatic function.

So, you know, it's it's it's a bigger deal than I think people often realize when those headaches start to get more frequent. Yeah, absolutely. And let's discussion of amyloid, which we've had in multiple discussions already, is a big deal because, you know, amyloid is like the police of the central nervous system of the brain.

And they bind and sequester, too. A lot of toxins that are in there. And it's supposed to fold in a way where it's supposed to be dumped into lymphatics, but it doesn't.

And, a lot of times, well, one specific company has recently came out with a functional drug to try to unfold that system in the way we're conducting lymphatics.

But the outcomes weren't that great. And part of the reason is because it's not really a holistic view at it, rather than just looking at the amyloid dumping.

And so I think that for most people, you know, headaches are actually should be seen as a huge deal. People should not, play it down. And I know there's a stigma out there saying that, oh, you have chronic headaches. That equals a weakness.

That's that's a very, like westernized stigma. But we really have to, to, to think about headaches in a very different way. And I'm glad you bring in, you know, so many things.

So, earlier you talked about, the actual, function of the brain looking at fMRI, which is functional MRI. Right. So are there studies looking at specifically brain function, specifically in relation to the number of headaches per day or per week or per month per patient.

So most of the work revolves around it's not so much it what they do is they look at people who are chronic versus people who are not. So.

## Brain Shrinkage, Amyloid, and Chronic Headache Risk

And our definition of chronic for most headache specialists is now down to about 8 to 10 headache days a month. It used to be 15, but people are understanding that this quantification process is happening sooner than we realize now that we have these sophisticated tools.

And, you know, what we see is that under firing of those conductor circuits of the brain. And for you neuroscience geeks out there, I'm talking about the anterior cingulate, the prefrontal cortex, the insula.

Those are the areas of the brain that under fire and eventually atrophy in people who are having chronic headaches. So yeah, we can definitely see now what the structural changes that happen in the brain as a result of the changes in function.

This is scary. I mean, you literally have brain shrinkage from headaches. You know, I know, I know I wish everyone knew that, you know, I'm doing my best.

You and I both. We're getting the message out. Yeah. And and, and I'll tell you, in the primary care setting, headaches are still really common in the primary care setting, but headaches are the number one symptom, not told to the doctor because most people kind of brush it off anyways.

But we really have to get rid of that stigma. But, but let's talk about some success stories. What? We're kind of your greatest success stories that you've seen of people combating and, debilitating headaches.

Oh my gosh. So my favorite way to do this is to combine, some medications with the science of brain healing, which I translate into actionable steps for people.

I think when we have a fusion of everything that modern science has given us, that's when people get the best results. So, for example, I was working with someone recently who told me that after three months of using this approach, her headaches were the best they had been in the 50 years.

Wow, that's a lifetime. A lifetime, I mean, and honestly, that's why I do what I do. Some of these stories are so powerful it makes me cry. I'm such a wimp.

But I mean, it's really incredible powerful because that, you know that. Like, what if that had happened for her 40 years ago? How much more life would that have given her?

And you know, another story that comes to mind. I was working with a gal recently who really wanted to have a child and had a great partner in her life was all set for this, but she was having headaches 3 or 4 days a week that would put her to bed.

And she very wisely realized, you know, I don't I'm not sure I can take care of the kid with these headaches this bad. She went through the whole process.

And, I remember one of the last zoom calls we had with her. You know, there's ten of us on the zoom call or whatever, and and she shows up and says, you guys, I have done so well for the past month.

My husband and I have decided to go ahead and have a child, and we all just clapped. I mean, it was just like such a wonderful moment, you know? And think of what you know.

How much life has that opened up for her to be able to have that impact and to bring these tools to her and give her something that's going to give her life a lot of meaning.

So I, you know, and those are those are just some of the highlights.

## Success Stories and Reclaiming Life

But, I think when we use all of the tools of neuroscience and modern medicine together, we can make a dramatic impact in somebody's life in a short period of time.

That's fantastic. And do you think that, what do you think are the biggest, levers to pull, if you will, when it comes to improving headache? Is is it diet? Is it sleeve like, what is it?

I think that the three most important areas are brain healthy nutrition and supplements. So I well, let me let me take a step back. I divide this process into four steps.

So the first step is reveal with labs to look at how the brain and the body are doing to see what clues that gives you about what's actually, you know, what's what's the root cause of these headaches.

So you need that piece. The second step is revitalize, which we do with food and supplements that are targeted towards the needs of the brain, which are different than the needs of the rest of the body.

This revitalize process is somewhat the same for everybody, but individualized based on the results of the labs. And then once we have that going in, the brain has the raw materials to start the healing process.

Then we start clearing out some toxins. As we talked about a little bit, the lymphatics is part of that. But there are several different detox systems in the body.

Our body is programed to get rid of toxins. We're just so overloaded with them. In our modern world, we have to work extra hard to get rid of them and extra hard if we have the, you know, problems with detox genes that so many people with migraines have.

And then once we've got that going on and things are healthier, then we start rewiring the brain. Headaches are already substantially better by this point.

But and then we need to start rewiring. It's as if the brain has learned to be good at headaches. We have to make it unlearn. We make it learn a new normal.

And the principles of neuroplasticity help us figure out how how to do that. So I think those are the biggest and honestly, I do not see this as a process where one thing works for everybody.

It's got to be individualized. And I also feel like there's that there are there are problems in all three of these realms going on when we work with people.

And so, so many people feel like they've tried nutrition and they've tried supplements and it didn't work. So none of this stuff is going to work. But what I tell them is, okay, so you fix one thing.

You put Michael Jordan on the court, okay? He's still not going to win against the other team that has 12 players. Like you need all the players on the team.

It's not 12. I'm not good at basketball, but you see what I'm saying. Like you need the whole team. You need everything to be working. You know if you fix one one biochemical pathway with one supplement, that's an

awesome start.

But that is not going to give you a winning team. Do you know what I mean? So that's why I really think it's got to involve all these different areas about how the brain heals itself.

And we have to amplify what the brain is naturally trying to do and help it help it show better. Orchestrating the symphony, right? Yeah. Yeah, absolutely.

So, there are a few things and in my experience, that has been pretty crucial as well. And there's some people, who have issues that are outside who have it can create headaches.

So spinal alignment, you know, issues that are huge. A lot of, cervical spine and neck issues, especially people, you know, texting all the time and stuff like that.

Sleep apnea is massively huge in this arena and in a lot of women under treated iron deficiency is such a huge deal, as well. And, and, and just like you said, there's so many different things we have to have an individualized approach to it.

And yes, just because, you know, you did a diet for, a few months and it didn't really work out, doesn't necessarily mean that's not the right step. It just means that you have to have some expectations.

And looking at these, these systems that are there. But one thing that you said was interesting is that, the brain can get like primed and triggered to have these sort of reactions.

So even a small trigger can trigger a bigger headache. And you said that that can be on trigger.

## A Four-Step Approach to Healing Headaches

Are there specific steps or are we still talking about, you know, orchestrating the symphony of, of improvements for nutritionals and stuff like that?

Or is it just one thing that can, trigger the brain? I don't think it is one thing. I really don't. But, you know, you really need that full team on the court.

But I'm glad you brought up this issue of neck pain and, you know, posture, how we, can exacerbate a lot of that. Because what we know is that headaches cause neck pain and neck pain causes headaches.

Yeah, yeah. So I'm so glad you brought that up. I started doing yoga after I had my first kid many years ago, and I eventually realized that my headaches were getting better, too.

So I was very curious about that because that was definitely not part of the curriculum in my Stanford residency. Nobody was saying, do yoga, right? But that was one of the first tip offs to me that like, oh yeah, the body has its own natural healing pathways, and there are things we can do to tap into that.

And of course, now we know that there are thousands of studies demonstrating the benefit of yoga and meditation for people with chronic headaches. And that is one of the tools that I teach people.

I am a certified yoga and meditation teacher. And those are very powerful, learned skills that can really move the needle for people. And what about what about breathing?

How important is the actual breathing processes? I know you teach yoga, meditation, breathing is a huge part of yoga. Meditation, right? Yeah. How does it contribute to everything so certain types of breathing have been scientifically shown to help shift the body from this chronic fight or flight state that people with chronic headaches are in the breathing techniques will shift them over to parasympathetic.

And there are actually wearables that you can use to watch your body do this as you are learning the techniques. So that you can make sure, you're doing it right and you're getting the intended physical result in your body.

But a lot of those breathing techniques revolve around slowing down the exhale. And so that is the most powerful way to help your body shift. Now, you can't necessarily live in that state, but if you're doing something every day, your body will start to shift in the same way that, you know, if you lift weights every day, your muscles will get bigger.

If you do the breathing exercises every day, your body will start to shift and you'll see it on devices to track your body to super cool people. Love that.

Yeah, maybe one of the things that we do here at Texas Center for Lifestyle Medicine is, we actually monitor we have EEGs on people's brains as they do breathing exercises.

And so we do remote neurofeedback of home neurofeedback. So one of the coolest things that we just started doing is that when we see that people's brain are so wired up to frequency, they're like that all the time.

When they have the device on, we're like, okay, let's let's do literally a 62nd meditation. The minute you do that, all the phone just slows into the nice alpha frequencies.

And then whenever they, they start breathing fast again or lose the breath and you can see the brain going directly back into the data system where like, what happens, you know, and it's it that's fantastic.

Yeah. What a powerful form of feedback. You know, it's like, yeah, that's cool to see how fast it is. Like it's it's it's like instantaneous. You know. Yeah.

But the fact that people are able to, to connect that and the brain frequency and the headaches and the breathing is just a beautiful symphony as you said.

And so, one last thing. And then, we'll, we'll close it off. The last thing that I want to ask you is something that I asked really commonly to a lot of doctors is what do you what what is one thing that you now know as a practicing physician that you wish you knew back in residency?

## Yoga, Breathing, and Neurofeedback

Oh, that is a good question. One thing that I know now, I would say, I wish that I had embraced, things outside of conventional medicine earlier because those tools are so powerful.

So my experience was very much that, you know, medications and surgery were 95% of what I was taught. And my worldview for so long was, okay, these are the tools that work.

Other tools don't work. And so I wish that I had, been exposed to or, seen the science earlier, to help understand how the body heals itself, because I think I could have helped a lot more people along the way had I come to that earlier in my career as opposed to later.

And, you know, in retrospect, you know, the, the, the influence of those factors in medicine is incredibly powerful. You know, that's what people see on TV when they're watching their favorite show.

You know, they don't they don't see anybody saying, oh my gosh, you can you can grow new neurons, you can grow new pathways or, you know, so not on commercials.

And so then I think sometimes people assume that that's not as good or not as legit, but, you know, if, if, there was a drug that did what, you know, for example, what magnesium can do for people with chronic headaches, you know, it would be plastered everywhere, right.

So the last thing I tell people to do is, go to this website, the headache quiz, dot coms all spelled out V headache whiskey. Com, and check it out.

## What Medicine Misses and Final Takeaways

What kind of headaches you got going on and how it's really affecting your life, and then take some next steps, with, with that page and the my, my, my, my biggest takeaway from our discussion today is that there's so many congruences with what you're saying with, dentist, with psychiatrist to really famous psychiatrists and another neurologist.

So everyone's saying really similar things, but in a very special way. So what we're really realizing, you know, right now it's 2022 going into 2023, what we're really realizing is that, the more outside the box that we become, that we that we look at, the more congruences there are and these patterns are not are no accidents because all these professionals, including myself and you, we all arrived at very similar conclusions, very independently and very separately.

You know, I went through the residency, the training and stuff like that, and so did everyone else. And it just fascinating that, we're really discussing the same, the same principles of, of health that's really required, especially surrounding, you know, brain health and headaches and, and psychiatry, as well.

So I really want to thank you for, for coming on and taking the time out of your busy day and thank you once again, go to V Headache quiz.com. It's all spelled out, for your headache survey.

Thank you very much. Thank you. For.