Dr. Michael Bagnell

Building Brain Resilience With Dolphins And Neuroscience

SUMMARY KEYWORDS

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Hello, welcome back to the Optimum Performance Summit. I'm your host Dr. Patrick Porter. Today I have a very special guest someone who is has knows a great deal about the functioning of the mind. He's a functional neurologist. I've spent time with him heard him speak. You also hold something that I know brought you to this talk right now he holds a dolphin camp. So we're talking about is Dr. Michael Bagnell. Dr. Bagnell, welcome to the summit.

00:25
Thank you. Great to be here with you. I always enjoy spending time with you. I learned so much just from listening to you even though you don't know that but appreciate our time together.

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Yeah, that's great. Well, today we're gonna be pulling out of your head, some of that information to share with our doctors. First of all, I know that people are going to be intrigued by the topic. When we talk about dolphins in the brain a lot of people are they don't understand maybe the connection so why don't you tell us what caused you to use dolphins in connection with the brain? Yeah, right.

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That's so unique. So the the really the backpack backstory is that when I was a kid, I wanted to

be an oceanographer. That was what I wanted to do. And I actually sent a letter with my mom's help, she typed it out. And we sent it to Jacques Cousteau. Those of you who are old enough remembers Jacques Cousteau. And we got a letter back a form letter that said, Sorry, you can't come on the Calypso, but you can visit us when we're important in New York and so on. So, reading just actually never manifested. So this is going back quite a ways. I'm at 56. Now so you can imagine I was probably in middle school or younger. So about a year and a half ago, two years ago now. Some of our clients who are have been clients for a long time coming in for brain based health care and Kinesiology and so forth. They approached me because they are owners in a group of these dolphins in human care, dolphin habitats. They're called throughout the world. And we happen to have some right here near us in the Florida Keys. And they said, Hey, you know, we know you do all this brain based work when you work with children and adults. Would you put together something that could work with our dolphins because we've seen physical therapists do things and occupational therapists. So I considered that and I thought, wow, this is a really unique opportunity. And so we went down numerous times from Miami to the keys. It's about an hour and 20 minute drive to the facility. And we met with the marine mammal specialist and I got in the water with them, which of course I loved. It was like the full manifestation of my dream. And we developed exercises in the water with the dolphins that were brain specific. And after developing those over a series of a number of trips down there, we put this together with land based brain training, including Brain Tap, which is an integral part of the whole process. And we came up with a camp experience for people to build brain resiliency. That's really the key for us. When you

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talk about resiliency, maybe some of our people don't understand what you mean by that. So it kind of delve a little deeper. That for us.

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Yeah. So brain resiliency. So we have people that come to the camp on one way I'll answer it that have had brain injuries. They've had concussions in sports, they've had fall related concussions or, or things around the house. They've also we've had people with different immune imbalances that have affected their brain. We've had people with anxiety and post traumatic stress disorder, and we've even had discussions with former military vets to come into our upcoming camps that we'll have in the fall, because we've been on a little bit of a hold as everyone and so people, many people come because they want to have their brain work better. But what really is the bigger view or the umbrella is brain resiliency and so to define that is your brain is as Dr. Ayman says, who you are, Everything about you is your brain, why you do this and why you choose that why you eat this and why you don't eat that how you respond emotionally and how You sleep or don't sleep. All these things are a composite of your brain

and the way it expresses who you are your personality and so forth. And so brain resiliency, we might define it as your ability to be to deal and roll with the punches of life. So if you have a very short bandwidth, you get very little frequencies, right and just know in a metaphor, but if we can expand your, your bandwidth, your brain's ability to deal with the oncoming stresses of life, and we are under a lot of those in this current age, if we can expand your brain's ability to deal with things and not get too far out of balance, then this is building brain resiliency, the ability to respond to the oncoming physical, psychological, emotional and chemical onslaught of normal human life, building the strength of the brain, the capacity of the brain to respond to things in its environment. That's great.

04:57
Now I know you're a big one on testing and that guessing because you're a functional neurologist and you have all these tests of explaining a little bit. If If I was to come down to dolphin camp, let's say I had a TBI, what would you be looking at that would tell me that this could be something good for me.

05:14
Yes, we are. You are right. We like to measure things right. There's some people involved in kinesiology. Many of you might know that language. And one of the patriarchs of Kinesiology would say measure, measure, measure, measure, measure, measure, measure, so that you know exactly how you're changing things. So we have the ability, again, I'll refer to Dr. Ayman technologies available to measure brain function, and it's non invasive. And we can do it very well for people. So we measure things like a brain map, so we'll take a cue EEG, and we'll find out what is the electrical activity in someone's brain and we measure that against a normative database. So we age and gender match it, we know where you should be the range of a healthy person. function in every bandwidth. And so we do a brain map, we do eye tracking studies of numerous types. Why do we might use the eyes because the eyes are the window to brain function, as the eyes move horizontal, up and down and all types of ways. It tells us about brain network. So we measure eye function. And actually, you know, Doc that's being used in Parkinson's research, autistic research, or autism spectrum, brain injury, cognitive decline. So they're using eye tracking measurements. And so we use them. We also measure balanced evaluations, how a person balances and moves their body with timing and coordination, because that tells us about the brain and then we'll even go into something with a very special platform on a computer where we can evaluate attention, concentration, verbal ability, and focus ability. And so we put all that information together and we have a very good Standing on what's happening in a person's brain on many different levels.

07:05
So, so once you have that data, and then afterwards, I know that our doctors will know this word

but our other people might know something called neuroplasticity happens. So can you describe what neuroplasticity happens in? In what role does the dolphins play in this?

07:21
Right? So? Well the the buzzword today is neuroplasticity if we can develop neuro plasticity in an area that's weaker in the brain or lower functioning compared to another area. If we can develop neuroplasticity. It indicates brain improvement, building brain network strength, you could say or building resilience. So what is neuroplasticity? The ability of the brain to change. You know, we know that because we can learn things even into our older age. You might not think that that's not you, but people might not think that that's plasticity. But of course it is. It's the brain being able to rewire and learn new things. Especially when it's been injured or it's functioning, maybe with anxiety or depression. If we can rewire the way it's firing, we may be able to bring someone further out of that condition. So neuroplasticity requires several things, which you know, so I'm preaching to the choir, one of my good close allies in building plasticity. Number one, you need focused attention, and you need directed stimulus. So that's one thing we'll evaluate someone's brain and will target the therapies to that area. Number two, you need that to be sustained over time, that focused attention in a novel and playful environment. So we know that if the environment that we're stimulating the brain is rather boring to someone, they're not going to get too much plasticity, right? You would imagine that it's harder to learn things that are really not of your interest than if you're interested. So we develop an environment for the brain training that's targeted, that's sustained with attention and it's novel. And that's One of the crucial matters and I use Brain Tap a lot for this. So I feel very strongly is the sleep and recovery. So we do this stimulation, if the brain can get into a recovery state that's proper. It develops healing and integration and plasticity, better than if you're not sleeping well and not recovering. And so, focused attention develops plasticity in a novel and playful environment. And the recovery during sleep helps the brain to heal.

09:29
I know we had we did excuse me a good interview with Bobby, who's one of our we use Wahby Of course, and I know you use Wiley and we can measure voltage across the brain. We can't really tell how many neurons are firing exactly, but we can do that by voltage. And that shows us neuroplasticity. Can you tell us a little bit about what you've seen happened down there as far as voltage changes over time with the brain and and how that affects somebody?

09:54
Yes. So we know that certain voltage measurements as you know, can tell us about the health of the body. In certain bandwidth, so it's getting a little more specific. But you know, we don't want too much voltage. And we don't want too little. We want to have it in this range that we

know based on research indicates a healthy responding brain. And so working with Wahby, as we did in the last camp, we're able to see voltages improve in it across all of the different age groups we were working with. So that was one thing. And then you mentioned earlier about the dolphins, how did the dolphins kind of come into this so we measure things before and before, during and at the end of the camp. Wahby was one of those we measured before and at the end. So we feel that that was a very good metric to use, we highly recommend that that device and that technology and it keeps advancing as they keep adding to it. But the dolphins will are really going to help us in working with the vestibular system. And so maybe we can expand on that.

10:54
Let's go into that.

10:55
Okay, so the way that we're looking at the brain so we do all these measurements Then we want to start stimulating the brain to develop neuroplasticity. Okay, how are we going to do that? Well, the brain, our brain, my brain, yours takes in information through the eyes through the sound as you're hearing now, through smell, I have actually an aroma therapy thing in here going right now I like that. So smell, sound, all the senses are the inputs to the brain, we know that. So also body movements, and then one that's buried inside here deep in my inner ear, the vestibular system, which tells me about motion. So we use the major ones, the vision, the vestibular and the body to give information to the brain in a targeted way, based on what the evaluation is, and so the vestibular system system is primarily working when you're on an unstable surface. You're in a boat, I know that you're a big boating fan, they're up in North Carolina. And you know, down here is voting is very big, but when I get in my pool right outside here, my visit stimulus system is more active than when I'm walking on a firm surface. And we know that the vestibular system, interestingly, projects to nine areas of the cortex and to projects down into the brainstem. So you have a whole lot of machinery in those areas. So if we can work with the vestibular system and create activity that's specific, then we can activate the brain in a very unique way. And so working with the dolphins, you can imagine you're in the water so your vestibular system is on a higher activation level. And then we do different types of things in the water where we're doing rotations or spins or movement as the adult with the dolphins. As a therapy partner, you might say an animal therapy partner to activate the vestibular system to drive a lot of activity in the brain. And I can tell you, as you can imagine, the most novel fun environment is in the water with those dolphins. They I mean, you just see people light up hyper vigilance goes down, you feel more calm, but you're like excited and you have a sense of joy. When you're in the water with them. It's they're really remarkable.

13:12
Yeah, that's awesome. And I know that they said that they wanted they, because I followed your Facebook posts and people that are going on there. They're saying that they actually can feel the vibrations or the sonar from the dolphin. So that's actually another way i thought was very interesting. What was happening there?

13:29
Yeah, we worked on that. In the last camp. We developed a we'll call it a dolphin meditation. So our clients will float. With our marine mammal specialists leading the dolphin and the dolphin will come up. Dolphins are using echolocation right? So they're using a different primary sense. Then we have humans use primary vision as our primary sense. Dogs use primary as their smell and odor, right. And then dolphins use echolocation. So they're sending out these signals and they're receiving them back so the dolphins will echo locate All around you and on you as you're in the water with them. And so in a meditative state or in a more relaxed state laying floating in the water, we put a microphone into the water, we have certain specialized microphone. And we recorded the echolocation on each client that was with us. And then we put pulled spectrographs with a specialist in oceanography. And so we have these really unique looking echo locations and the Hertz and cycles, which you're more familiar with me go up into I believe 100,000. So we we know that the echolocation has a profound effect on humans. We don't know specifically yet how profound but we did talk about this is an electromagnetic activation that the body is getting and it's healthy because it's coming from a biological source to a biological source, right? It's not a 5g or all these things that might damage people. This is one we know is biologically helpful.

14:58
Right and that's very high gamma. And of course, the research shows gamma breaks down amyloid plaque and gets that high levels of creativity and healing actually a lot of healers that we've measured. We've never seen go to 100. But there's been people that have been some of these monks they meditate, they've got them up to 200 hertz frequency. So I mean, they're really generating those high gamma waves. If you can figure out, I think that alone should pique the interest of a lot of researchers because they're trying to figure out how to break that code, how to get more gamma activity. So those a little bit more about the insights you found with working with dolphins in the in the camp.

15:35
So in working with the dolphins, we've seen some really unique changes in people, some that are measured, as we talked about with voltage, but also in their their emotional experiences. So many of the people that have dealt with post traumatic stress disorder, which now is probably

tripled or quadrupled the amount of people that have experienced the suffering now with all the words going on. Those people would give us anecdotal expressions of, you know, it's remarkable how they felt like they got unloaded. They felt like things just came off of them. And there's just there's it's difficult to measure. Now we do use measurements on self graded assessments for PTSD, we there's some of those that we can use. But this was something that went way beyond those measurements. This was something in the, in the personal expression. That was some of the interesting things we saw. And then even with autism spectrum in a young adult, late teenager, her her expression, and her verbalization of her experience was was really unique, and we've captured some of those and they'll be released in a video soon.

16:41
That's great. Well, I know that there's people always looking for a way to stimulate the brain, get the brain improvements, get everything happening, when if they're not able to get to the dolphin camp, you know, what can people do to keep their brain functioning, especially during these times of high stress?

16:59
Yeah. That's it's one of the most important things. So we put together a five brain master tips that will get to you for people that are interested in that. And that'll be nice for them. But one of those on there is exercise. So everyone, I would say, for the most part, people understand exercise is good for me. But it's so profound on the brain. I frequently say this, I'm going to have to go back and check the literature. But I believe, based on my last analysis of the PubMed journals is that there's more research, validating exercise and change on the brain than nutritional supplementation and other forms of therapy. It's just so incredibly deep in the x, the amount of exercise and how it affects brain regions and networks and hubs and all these things. And it's the language we use to describe the areas of the brain not just the lobes. So I would say exercise is really crucial. And then someone might say, Well, what do I do? And I would say, you're going to have to do a little research but we'll help you with the five masters Because Yoga has benefits to certain regions of the brain like the limbic area, the emotional cortex and the amygdala, which is your fear responding center or your, something's wrong in the environment responding center, we use high intensity workouts for the frontal lobe, which would include weights and, and things where you're responding quickly. And then we have coordinated exercises that might affect further back in the parietal lobe and the cerebellum. So different types of exercises and a blend of things would probably be one of the most crucial things to do. And you realize that so many people were locked in during this. And we saw more people in our neighborhood trying to get out exercise. And it's one way to offload a lot of the stressors that are building up in the brain network. So I would say exercise would be probably one of my number one key goes to go twos, and you need a little direction that will help you with that.

18:55
Yeah. What is the they say that sitting is the new smoking and a lot of people are sitting all day Long they're looking at their screens or doing their things. How is that affecting their neurological function?

19:05
Yeah, we're getting a I think there was an article that I posted not too long ago while I know there was on zoom brain. So I have trouble with even focusing on the screen and the, you know, the smaller panels but, you know, the we know, there's the electronic emission from the screens and you're sitting in most people's posture will kind of decrease in their ability to be upright. So we know that the sitting is not ideal, and the screentime it's just changed the human dynamic, so much even being face to face with you. We're really not face to face. And so it's created a difficulty and I can't even probably elaborate enough as some experts in this because it's so new and we're starting to understand how is it affecting us but a lot of people have Zoom fatigue, that's what it is zoom or, or WebEx fatigue because all the video and the different types of you're getting different activity of your brain through your eyes. Because you're worth looking at a two dimensional thing rather than a three dimensional, and this is pretty big now young people might feel more comfortable with that because they maybe spend more time. But I'm used to being face to face with clients like you are. And so there's something there's a different dynamic probably yet to be measured.

20:18
So when when you're looking at what's going on in the brain and what's happening in what, especially what's going on now, when people have they call it the infinite now, because it's like Groundhog Day, everybody's doing the same thing every day, and they're doing these things. And it's actually that usually only affects people who are hostage in a hostage situation in prison. Nothing but that seems to be kind of our state of affairs out there. How if you don't have an outcome, you don't have a goal or you do you're not purpose driven. How does that affect our nervous system in our in our change in the ability to adapt and improve?

20:51
I think dramatically, I mean, myself through the whole thing I was doing, my wife and I were doing projects around the house, right? And I know many people work. But there's probably just as many that we're not I know some young people that were clients of ours prior to it and they were out, they just kind of end it. I think it has a lot to do with someone, you know the individual, some people a little more afraid of the situation and what are the possibilities, so they kind of hunkered down in and that was much more negative for them, of course, more social interaction, but no projects, no, nothing to work on no goal oriented behavior. goal oriented

behavior drives dopamine. And so without goal oriented behavior, even if it's, I'm going to plant new plants or I'm going to make a new pathway, my backyard or I'm going to put astroturf in my garage. You know, if you don't have these little projects, you're not driving dopamine or dopaminergic centers in the frontal lobe, and then you start to get a depressed frontal lobe function. You may not be depressed, but your frontal lobe starts depressing its function. So goal oriented behavior. And actually I should have mentioned that when we were talking about neural plasticity, it has to be goal oriented. goal directed, as well as focused and sustained and novel and playful. So I think it's very important that we would have small goals, whether it's going to be I'm going to exercise every day I'm going to read every day, you got to create something. And I can imagine, it's really interesting that you mentioned people that were prisoners, because I can, I can't imagine I'd have to only imagine I can't really get into that experience. But you've got to have something that keeps you going, I don't know, whatever it might be something in your, you know, your environment that you keep looking ahead looking at. And we are we are geared for hope you and I mean, both have a faith based background. So we are geared to have a hope. And the hope is things you can't see it's beyond where you are. So, you know, we want to encourage people that at least be taking on small things that you can accomplish in those compliments. You drive dopamine and serotonin and you keep your brain healthier.

22:56
One of the things we always talk about and you mentioned it early on asleep. And we know that sleep is a superpower that if when you get it, you feel like you're a superhero. If you don't you feel like somebody put kryptonite in your pocket. What do you What's the? What drives that in the brain? And do you have any tips for our viewers on maybe how they can sleep better?

23:16
It is one of the on the five tips for master brain health. So I'll cover it a little bit here. It's a it's a network property. It's not my language, but I like that there's some wonderful TED talks on that on sleep, and from different people in psychology and brain research. And, and I think they're quite good to listen to they're short, you know, they're bite sized, and you could get a good overview, but some of the key things are, you have to have good mitochondrial health. And so for people who are in healthcare, you understand this is the powerhouse of the cell. So you have a cell you have these mitochondria, and they're generating ATP. It's the energy of the cell. It's actually called the as the powerhouse of the cell, but it's the currency of life. ATP. I like that language. I borrowed that from a clinician out in Canada. fornia so we have to generate ATP actually to be able to sleep well. So the less active you are, the less active your mitochondria the less ATP is kind of a double edged sword, you have to be active to generate get your mitochondria functioning to have more ATP. Now you can also use nutrition is a real key for that

and there's some specific things like antioxidants. So whether you're getting them from eating a lot more healthy vegetables, the dark greens, you need those greens and you can get a lot of this information from a very dear colleague of ours. Her name escapes me for a moment but she suffered with MS and she developed her own protocol and helped her self recover. So dark green vegetables and the carotenoids you need from the colored vegetables and you're pulling all these antioxidants in. You can get them from some juices, but we prefer them from veggies. Or for some people it's coming through supplements because whatever we however we get them in the antioxidants are needed to reduce oxygen And when you're generating energy, you're building oxidation. So this is very important for sleep. So nutrients and supplementation. Some people use melatonin, we don't like to go there initially, because that's going to affect the brain in a way that we want to try to get it working without that it generates its own melatonin. But you can use like magnesium, a lot of people are deficient in magnesium. So magnesium calcium products complement each other and helping sleep. Many people are using CBD, we're seeing great successes with a lot of people. So whatever works for one person may not work for you, but you have to experiment and under someone's supervision. This is always recommended or a physician or clinician supervision as to what is a better product. You don't necessarily want to shotgun these things yourself, but there's a lot of good resources that you're connected to and I am and we can help people find those in their own community but CBD, magnesium calcium supplements, exercise and then Another thing that's very important is, of course, people understand this, I think sleep hygiene, a cool dark room, no lights. So we have a not a fan. But we have a an air filter, a very special one in our bedroom, but it has a very small blue light on it. So I cover that at night because that blue light is not good. And then you have the light switch, which has a little light in it. So we get all that light cover. No light exposure, dark and cool is very important. sleep hygiene, not looking at the screen. If you wake up in the middle of the night. I don't look at my phone to see what time it is I've disciplined myself, it's like, I'm not going to look at that I'm not going to check that I'm just going to turn over because that bright light stimulates pathways that is going to give an awake signal to the brain. And then like Dr. Andrew Huberman out at Stanford, who's one of their neuroscience specialists, has done a lot of work in light and the morning light and the actual new light from the the atmosphere in the sun, setting your circadian rhythms very important, very important. So those would be things I would start with exercise supplementation and diet. And then also your circadian rhythms and sleep hygiene.

27:16
What are you in the role of just going to mention to for the listeners we I was I was sent by the company cooler. I don't know if you've ever seen that before it actually you can set the temperature in your bed different than your wife. So like Cynthia has it. She's a little different. I can set it so I'm at 56 degrees in the middle of the night for for hours. It's awesome. I've been sleeping.

27:36
I need the name of that I need.

27:37
Yeah, it's from chili. Chili.com, I think is the name of it. They're one of their they're one of our people we work with in that that was all the difference because a lot of people will sweat souls profusely during night and they don't realize like you said they have to get their core temperature down to really get a good night's sleep. I get a lot colder than Cynthia Cynthia still She's not able to regulate like I do, I, I love it to be really cold. So that works really nice for me. But it makes a big difference in how you're doing it. But the other thing and I know that inflammation right now a lot of people think that they might have a leaky gut or they've been told they have inflammation, if it's in the other parts of the body, it's probably in the brain. So what is your What is your advice to about inflammation? How do you check out and what do you do to resolve that issue?

28:25
Well, I agree with you 100% that inflammation is a problem. There was a book written some years ago and now there's been numerous ones inflammation nation, because of primarily because of our eating in our food supply. And that has a lot to I won't get deep into that but it has a lot to do with our omega threes and omega sixes and taking in too many of these fatty acids that can create inflammation. Because we're overwhelmed with omega sixes because of corn and soy and, and and on and on. So you can get different books that help you understand that but we are a nation that is dealing with many inflammation related problems in the in our physiology. And if it affects the gut, it affects the brain. You're absolutely right, because we have too similar blood brain barrier and gut barrier. So as you mentioned, leaky gut. So now on the other side of that coin, I hear people say that they have inflammation so much that I think it's become, maybe not maybe because it's not quite the issue with some people. It's kind of like, you know, you and I've been around a long time. So at one point in the culture, everyone had candy another point in the culture, everyone needed to drink carrot juice to stop cancer and other so we go through these cycles. So we know inflammation is a problem. We say, Yes, we check that box. We know it's very much diet related. check that box. But we also don't want to attribute everything to inflammation. So let's just say we are dealing with inflammation. How are you going to get inflammation down in the body? First of all, you can do a blood test, like you said, I like to measure so we can do some blood tests, simple lab tests to see if you have some inflammatory markers. Now if you don't have those inflammatory markers, but you have joint achiness and muscle stiffness that seems chronic and you don't sleep well and you retain water. How do you know it's inflammation? Well, you'd look at your diet, because some things might be outside of the clinical range, meaning in those lab tests, which may be somewhat

limited, you still feel like it's inflammation, you start changing your diet and it goes back. It's not that complicated, right? How many diets books do we have in nutrition books, my wife and I must have 50 over 30 years, but we really need to get back to the simple basics is getting the proper veggies in there, organic grass fed beef, keeping protein levels at the right level, sometimes we get those protein levels a little skewed in it. It plays havoc on our genes, the mtorr gene and things so inflammation is an issue. What do I do? I take in a good supply of fatty acids, healthy fatty acids, I don't go on the cheap With fatty acids, I get them from food sources. Olives, avocados, I have a Haas avocado in my backyard that's this year is finally giving avocados. I'm so excited about that. But you know, also I take fish oils and I've been doing that for years a high quality fish oil that is a blend of EPA and these are things that help to reduce inflammation. How do I keep inflammation down in my gut besides eating proper probiotic, and there's many different strains and types. So when you do those things, you start to mitigate inflammation in the brain, in the tissue, especially the fatty acids and in the gut. And when you do that, you clean up your diet, some and you measure your blood markers. You have a good idea of what's going on.

31:43
That's great. You've given us a lot of tips, a lot of things to think about you're going to share with our viewers here on the summit they can they can go over to the VIP lounge, they can look at the dolphin video that has been able to get your five tips for mastering the brain. They can sign up when they do We're going to let them know about the master class. And where we can learn more and double a little bit deeper, they'll be able to ask you directly questions and things of that nature. Would you like to share with our viewers?

32:12
Well, at this point, we know we're really pressing ahead with helping people start to recover brain health, not only from injury because we actually had a few people call us last year at our camp, say, Well, I'd love to come but I haven't had brain injury. We say you don't need to our brain healthier now. And I believe it's Dr. Bredesen out of UCLA who wrote the book on Alzheimer's and reversing that process through nutrition and so forth. I think it's he who said, each year we should be getting a Cognos copy. And I really love that I I give him credit for that. It's time for us to start to evaluate how we're doing with our brain, take some measurements, and then apply the appropriate therapies or exercise or diet, things that we already know work but we want to target them We don't want to use a shotgun approach. And I do have to tell people that one caveat is you might learn a lot of things and there's a lot of language about, you know, biohacking and hacking your brain. But it how much better if you can do it in a targeted way? Right? None of us go to the gym, any of us who biohack like I do, also, I don't just go to the gym, and God, I don't know what I'm going to do. I go there with a plan, and I'm targeting

things. So we want to have the same kind of plan with the brain. And it's possible, we can do it through measurements and direction and just some guidance that is available to you all. And we're happy and we love to do it because we like to see people brought back this is one of the reasons I do this is because when a teenager of let's say 14 to 19 is taken out by terrible anxiety or depression. I like to see them be able to be brought back to the child that they were that this family had that really tugs on my heart or the college student. That was so struggling to hit a stop dropout, they couldn't handle it, because their brain starts to dysfunction or the person in their late 50s or 60s that's having this decline. I like to see if we can bring them back and give them more autonomy and give them more of their life back or like we have right now we have a 19 month old baby that we're working with. So we work all the way down to little ones who suffered from a strep infection that was not properly diagnosed, that was missed. That broke through the blood brain barrier, as you mentioned, that created a serious meningitis and then the baby had a stroke. And so you can imagine the deficits now 19 months young couple in their 30s what do we do? So they have some wonderful physicians, a team of physicians and neurologists, neurosurgeons that have done work. And we're teaming up with them and working, trying to get this baby back a future. So these are the reasons why I do this is to give people back some level of brain resilience, brain function, brain health and Send them on a trajectory. Right? I'm not the end, I'm maybe the beginning the trajectory of getting back to their life and doing what they want to do

35:08
right now. That's awesome. And now I want to thank you again for being on the summit. And I want to just remind everyone that it's said statistically that before were five years old, we've all had at least 2000 to 5000 traumatic brain injuries. And now that I have grandkids I believe it I it wasn't really that conscious of my own kids. But now with the grandkids, you know, you got to turn them back over the parents, if you're watching hit the tables and fall down and hurt their heads and but it's way our brain remodels. So, this is a chance almost everyone I talked to, throughout my history as a therapist, they've always said one of the things they'd love to do is go swim with dolphins. This is beyond swimming with dolphins. This is actually forming a relationship with a dolphin in your brain. And we know the dolphins we don't even know that the end of what dolphins can do for us. We don't even know what they're communicating. But we do know there is a healing effect there. And so if you've ever thought About that, this is your chance to head over to the VIP side, download the video or watch the video that's on there about the dolphin camp. Sign up for the master class. Let's get you trained up. Remember, this video is available for the next 24 hours free of charge. If you know somebody out there that has, maybe they're having a traumatic brain injury, maybe they're having something going on that they don't know what's happening. Get them to watch Dr. begnas video here, see if you can get some understanding about neurological function, and then see if dolphin camp is right for you.

Or if there's something else that maybe Dr. Bagnell can help you with. So again, thank you for being on the summit. We appreciate it. And always love to hear your information and your stories. So thank you for having us. so wonderful to be with you always always. And if now if you're waiting for the next speaker, then just hold on the next speaker will be right with you. We'll be right there. And God bless you and thank you for being part of the summit.