



Conscious Life presents

# TRAUMA SUPER CONFERENCE

## How trauma impacts brain health

**Guest: Dr Austin Perlmutter**

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### **[00:00:09] Alex Howard**

Welcome everyone, to this interview where I'm super excited to be talking with Dr Austin Perlmutter, and we're going to be talking about the impacts of trauma on the brain, but particularly some of the simple, practical things that we can do to support improving and having sustained better brain health.

To give you a little bit of Austin's background, Dr Austin Perlmutter is a board certified internal medicine physician and internationally recognized expert on how environmental influences affect our mental and brain health. His research on lifestyle factors in depression have been featured and cited in peer reviewed literature and he educates on the topic on top podcasts and is a keynote presenter around the world.

He is the co author of The New York Times and international bestseller *Brainwash*, which he wrote with his father, David Perlmutter, MD, who's also interviewed as part of this conference and covers our poor modern day brain health and the role of everything from diet to social media on our cognitive and mental state.

He is a frequent contributor to websites including MedPage Today, Doximity, Kevin MD, Medium and Psychology Today. And hosts the Get the Stuck Out podcast. He currently serves as the Senior Director of Science and Clinical Innovation at Big Bold Health, where he is running an IRB approved pilot trial exploring the effects of polyphenols on epigenetic expression.

His overarching focus is helping people find non pharmaceutical strategies for getting stuckness out of their brains and bodies, using the best that science and nature have to offer. So firstly, Austin, thank you so much for taking some time. I really appreciate you doing this interview.

### **Dr Austin Perlmutter**

Yeah, I'm glad to be here.

### **Alex Howard**

So where I'd love to start is that your original training and background is as an internal medicine doctor, but a lot of your book and your kind of interest around working with the brain and mental health. And so I'm curious as to that journey and that particular focus.

**[00:02:34] Dr Austin Perlmutter**

Sure, well, as you said, I trained in and kind of planned for a career in internal medicine and for people who may not know what that is. Internal medicine in the States is really about managing chronic diseases. So this is where you're looking after people with heart issues, people who have had strokes, people who have diabetes, people who come into the hospital with a wide range of issues and also in primary care.

And throughout the training, I kind of came in with this, I guess idea that I would be healing people. That was always a big desire of mine to be able to bring somebody from a place of relative sickness to a place of relative health. And what I found I was doing repeatedly was not necessarily healing people, but rather just slowing the rate of decline. And I'll say that again, I was basically just slowing down the speed at which people were getting worse.

So whether it was diabetes or heart issues, weight problems, I wasn't actually getting to the root cause of the issue. And it wasn't that I wasn't trying. I would say, hey, let's work on your diet. Let's talk about exercise, let's talk about sleep.

I didn't want to have to keep prescribing medications. I wanted people to be healthy without the need for medications. Yet things didn't go all that well. And what I realized is that my experience was in no way atypical that around the world, the way that care is generally provided in medical offices doesn't actually get to fixing root causes of the problem. And it's easy to kind of say, well, I blame doctors because all they're good for is prescribing medicine. But I would challenge that the issue is that we are now living in an unhealthy world where the status quo is unhealthy.

And that led me to a very important inflection point in my life where I had the understanding of unless I can get to the root source of how we make decisions and what is driving our mental state, I'm really not going to be able to address the actual driver of all of these health outcomes. And so that led me, as you already alluded to, to trying to better understand how our brains get modified by our interactions with the modern world, how they get rewired, and how that then leads to worse decision making, worse mental health, worse overall brain state.

And if we can understand how that happens and we can start to unravel that and rewire our brains in our own best interest, we then have brains that are on our team. And I think this is fundamental for most people. And most of the time their brains are being driven by the influences around them, the commercials they see on TV, the inputs they get through social media, what they take in through their friends and family. And if we live in, which I would argue we do, a society in which most people are now unhealthy, then if you allow for your brain story to be written by your environment, you will most likely wind up unhealthy.

So my goal has been to help people to understand that and then to understand what they can do to take back agency over their brain wiring, to give them the ability to start making healthier choices, to feel better, to start directing their lives for the better. And really that's been my focus for the last many years of my life.

## **[00:06:01] Alex Howard**

I love that thing you just said around our brain story being written by our environment because I think a lot of us don't realize perhaps first we have a story in the first place, but also the recognition that that has an external driver. So maybe you can say a bit more about that environmental influence and how it impacts and shapes, I guess, our brain health, but also our physical health.

## **Dr Austin Perlmutter**

Well, Alex if you were to walk down the street and stub your toe. You would say, I have pain in my foot, I have pain in my toe. It wouldn't be necessarily you. You wouldn't have this intense connection to an identity of the person with that damaged toe. You'd say, I have this toe problem, and you would do something to help that toe recover. You might go on crutches for a while. You might just favor it, not put too much weight on it.

But when our environment changes our brain, it changes our fundamental understanding of who we are, because that is the processor that is allowing us to interact with the world. And so when our mood gets low, it's hard to create space between us and the low mood. It's hard to be objective about it, because that's us when our cognition gets worse, right?

So if we develop dementia, or even if we just have worse patterns of decision making, I chose the unhealthy food over the healthy food. It's hard to say, well, that is a reflection of my brain function. It's usually tethered to identity. What that leads to is what I would say, one of the biggest issues in how we approach behavior change.

And that is that we tend to blame other people and ourselves for what happens in our brains. So again, if you stub your toe and your toe is hurting, you might blame your toe, oh, dang it, toe, I really hate how much you hurt, but you're probably not going to blame yourself as a person. You're not going to say, I'm a worse human because my toe is hurting right now.

Yet when our brains are hurting, when our brains are being rewired in an unhealthy way, leading us to feel crummy, to make worse decisions, have worse cognition, we tend to blame people for that. We blame people for making bad decisions. We blame people or feel like it's a reflection of them being inferior when they have worse mental health, rather than asking what in the environment has shaped the brain in the way that it's been formed.

And so just a very simple example of this, if you, like many people, are trying to make better decisions. So maybe it's a New Year's resolution. Maybe you're just trying to eat healthier food. Maybe you're trying to get to the gym and you wake up in the morning, you say, today is the day I'm going to go to the gym, hit the snooze button eight times and wind up sleeping in.

Don't go to the gym. That's a very easy scenario to just blame yourself for being weak, for not having the willpower to follow through. Yet if you ask what is happening in the brain, you might then ask, well, I know that sleep quality is associated with decision making, and if I don't get good sleep, I don't make good choices. So how is my sleep last night?

Or you might say that diet is associated with brain quality. How did I eat last night? How has my diet been? You might say, I know that stress is associated with the quality of our decision making.

When we are stressed, we tend to make more habitual decisions, and often that means making unhealthy decisions. So we ask, am I stressed right now? Because if I'm stressed, I'm less likely to get up and push myself to go to the gym.

**[00:09:37]**

And you bypass the entire blame conversation, which honestly doesn't get us anywhere other than just blaming ourselves and each other for what is a brain process. So instead of blame centric mentality, you get into this curious biology based mentality, and then you can start to say, well, what can I do differently?

Right? Instead of just saying, well, I didn't do what I wanted to do. I don't feel the way I want to feel. And that's basically just me, there's nothing to say about it. You say, what can I do to improve my brain function that will enable me to think and feel a different way starting tomorrow, starting in an hour from now?

And I think this is another kind of big fallacy that people tend to over focus on how they feel and what they do in the moment, rather than planning for where you have the most opportunity to change your brain, which is, let's say tomorrow, not necessarily today.

**Alex Howard**

It also strikes me as you're talking, that often when people think about the brain, they think about it particularly in the wider context of trauma, think about it in a sort of psychological way, in terms of patterns of thinking and so on.

But the point I think you're making here is really important is that just as much as there's a top down effect, there's also a bottom up effect in terms of what's happening in our physiology. And in a sense, if we're only working with the first piece i.e., the psychological piece, what you're saying is we're really setting ourselves up for failure. And then this repetitive loop of I can't do it, it won't work. It's not possible for me to change.

**Dr Austin Perlmutter**

That's right. This is kind of a challenging thing to get your head around, no pun intended. But when we talk about psychology, what we're really talking about is the manifestation of biology, right? So how we think, how we feel, how we talk and interact with each other. This is a reflection of our brain state.

So I do a lot of work around depression, and we talk about depression as alterations in how we think. So we might have a low mood, we might have low energy, we might have issues with sleep, we might have issues with how we eat, eating too much, not eating enough. And we have just a general negativity bias around the way we see the world when we're depressed. Things just aren't as sunny as they would be if we're not depressed.

And that's important because psychology is kind of the way that we're able to talk about what is, in essence, an incredibly complex system, which is neurobiology. But I think often we get stuck in the psychology. We think that is the actual thing where it is part of it. Right? So our psychology changes our biology and vice versa. But if you're asking about how is it that I feel, what does it actually represent?

**[00:12:24]**

Well, that's where you can start to talk about things like neurons. You can start to talk about things like how those neurons are wired, things like neuroplasticity, things like the immune system in the brain, because these are really the building blocks that allow us to see the individual trees in the forest and not be stuck on, well, here's what it looks like in the forest level.

Now, again, I'll caution, it is really important for us to understand psychology because it allows us to think and feel about something incredibly complicated in a way that makes sense. But where psychology can potentially create an issue is if we stop there and don't ask about, for example, how does diet influence our brains and how does that then influence our psychology? We're missing out on a big part of the conversation.

And per my point earlier, I think psychology can often be misconstrued in a way that leads to blaming ourselves and other people for some sort of a character deficit, where if you introduce some of the biology to it, and I'm sure other guys are talking about stress and how stress and activation of the HPA axis changes our thinking, changes our brain wiring.

Well, it's hard to necessarily then say, well, you're reactive. And that's a character issue when you understand that having higher levels of stress, which may be without your control, you know, imposed through your outside environment, is linked to increased reactivity. So I think this gives us more empathy, more compassion, and hopefully more solutions for things that we can all be doing to improve our brain state and therefore improving our psychological state.

### **Alex Howard**

You mentioned about the impact of diets and food, but maybe we can open that up a little bit more as well around what we eat and I guess also what we absorb in terms of digestive function, how that impacts upon our brain chemistry.

### **Dr Austin Perlmutter**

Right, well, to go back to internal medicine here for a moment, so a lot of my time was spent in the hospital. And what was always fascinating to me is that the food in the hospital was far lower in quality than what you might find in an average restaurant on the street. And so we would have all the fast food stores represented in our hospital.

So you would check out of the hospital and go get your hamburger with double cheese or a slice of pizza. And often patients who were hospitalized with heart disease, diabetes, et cetera, would go out of their hospital room so they could get this food and the food they were served in the hospital bed was often of equal, if not worse quality.

### **Alex Howard**

Same problem in the UK...

### **Dr Austin Perlmutter**

Why that's important? The default state as it relates to nutrition in at least American, but I would generalize and say most healthcare systems today is that food is calories. If you eat too much

food, you get overweight and that causes problems. And then probably we shouldn't eat a ton of junk food if we want to be healthy.

**[00:15:24]**

Now, the biology piece of this conversation would say that food becomes the building blocks of our body, right? It's not like you are photosynthesizing. You're not pulling in photons from the sun and then turning those into matter in your body. Instead, what you're doing is physically building yourself out of the food that you consume. And that certainly goes for the brain as well, where you have one of the richest concentrations of specific types of fats, especially DHA, an omega-3 fat, compared to anywhere else in the body.

So you could say, does the function of most things reflect the structure of those things? If a building is built out of more substantial building blocks, more resilient building blocks, is it a better building? Will it function better than a building that is put together with cardboard? And the answer is yes. So at a very basic level, we need to understand that the food that we eat becomes our bodies, becomes our brains. If your goal is to build a healthy brain and body, then you probably should use the higher quality building blocks that's I think pretty straightforward.

Where I think many people, including in medicine, don't necessarily have enough insight, is that if you think about the biological systems that drive how we think and how we feel, what we're talking about here is the endocrine system. So that would include molecules like cortisol, which people are probably aware of as a key kind of stress hormone. It includes also the immune system. And an area that I spent a lot of time researching is how our immune system actually influences our brain function.

Specifically, inflammation in the brain has been linked to conditions like depression and PTSD. And it is thought that our levels of inflammation in the brain are actively changing how we think and how we feel. So then what changes our levels of inflammation in the brain? Well, this is, again, where diet becomes a very important conversation because diet is not just those building blocks.

Diet by way of parts of the body, like the microbiome, can send signals to the brain through conduits like the vagus nerve and through metabolites like short chain fatty acids. It's now believed that what happens in our gut as a reflection of our diet is actively changing how our brains work. So I know we're getting technical here. I know this is getting complicated. But the idea that I would want people to understand is that as it relates to the importance of your food choices for your cognitive, for your mental health.

We now know that there are a number of pathways by which the quality of your diet influences the quality of your thoughts, the quality of your day to day experience through your brain. So you think about the importance of voting for your politicians because they're making big decisions that are going to influence you. You are voting every day with what you decide to put on the end of your fork for your brain function, both through those building blocks, but also through a number of these other pathways that we now know influence aspects of our mental and cognitive health.

**Alex Howard**

And of course, in a sense, there's an interconnectedness here, right? Because sometimes people, the thing they're most aware of is, for example, you mentioned working depression, a sense of low

mood and depression. And so the assumption is, because what's happening is a mood issue, I need to do psychological strategies to lift my mood.

**[00:19:02]**

But the point that you're making is actually the origin of that may be inflammation in the gut and what someone's eating or someone's capacity to break down and absorb that food. It's actually that that's driving what's happening in terms of their mood.

### **Dr Austin Perlmutter**

Yeah, so let's stay on this for a second. Specifically around depression. So there are always a number of hypotheses for what is driving people to be unhealthy today to people feeling bad today. You could say, and I would say that in so many ways, life has improved dramatically in the last 100 years, right? We have indoor plumbing. We have access to more food than we used to. We have access to all these conveniences that, in theory, make our lives a lot more valuable, worth living.

But what we don't see is a dramatic drop in rates of depression. And so there are hundreds of thousands of people around the world right now who are experiencing depression. And what's notable is this isn't necessarily in countries that don't have access to all of these resources. We're talking in developed countries.

We're talking about throughout Western Europe. We're talking about the United States and Canada. This is in places where people, on average, have more access to, in theory, the resources that should make them happy than other parts of the world. So there's some sort of a disconnect there as far as we're getting all the stuff that we're told is going to make us happy, and yet we are not.

And the way that depression at least has kind of been proposed to exist in the last decades has been there is some sort of an issue with what are called monoamines. And monoamines are a group of molecules in the brain that are commonly thought of as neurotransmitters. Best examples here are things like serotonin and dopamine. And so the medications that are most commonly prescribed for depression are thought to work by increasing availability of serotonin.

I mean, there's other ones of these, so norepinephrine and dopamine, but really serotonin has kind of been the focal point. Now, what we've learned in the last couple of years is that the science connecting serotonin issues with depression is not all that solid and it may not be much of anything. It does support the idea of this massive industry of antidepressant medications that are called SSRIs, selective serotonin reuptake inhibitors.

If that isn't really the solution, then we have to ask, first of all, if these drugs work, do they do something else? And we're now learning they may work through inflammatory pathways, through neuroplasticity, things beyond serotonin. But the other question that I would pose is if our focus is on treating conditions like depression only when they're diagnosed, we are missing the majority of our opportunity to improve things.

Right? It would be like saying we're not going to do preventive cardiology. We're only going to worry about you once you have a heart attack. It makes no sense because that is the way we approach mental health conditions only worry about it once it's bad enough that you could get a diagnosis. If you take a step back and say, we can't handle both from a financial and from a lower

quality of life perspective, waiting until people are diagnosed with a mental health condition before we start intervention, then we have to ask, what is driving all of these conditions?

**[00:22:27]**

And that's where the conversation about things like lifestyle modification becomes so important because those are the variables that have changed the most in the last 100 years. You look at how diet has changed, how our sleep patterns have changed, how our behavior as far as how much time we spend with other people in meaningful relationships in nature, exercising has changed.

Those things are 100% known to have been changed and mostly for the worse. So my perspective is, all of us need to be spending more time thinking about this. Because if we live in a society where the only option is pills, and in the case of mental health, specifically depression, those pills don't work all that great.

We're going to wind up constantly chasing our tails and experiencing a whole lot of side effects and withdrawal effects and other problems as a reflection of preventable issues.

**Alex Howard**

Well, I guess also one of the things that you're speaking so eloquently to is that often what one's doing with medications like that is they're treating a symptom. And the point that you're making here is that there is often a lot more going on. There is also things that we can address, but we need to get to the root cause of what's happening, not just try to address the symptom of that.

**Dr Austin Perlmutter**

That's right. I mean, you can use whatever analogy you like the iceberg. But the point being, by the time you get to a doctor's office and you're being diagnosed with a medical condition, it's a lot that has already happened and a lot that is below the surface. For the most part, the person doesn't just wind up in the emergency room with a heart attack due to the blockage of their coronary artery that didn't have already a ton of blockage the day before and a month before and a year before.

These are things that build up over time. And I think that as it relates to mental health, that's kind of been the way we've looked at it as well, which is, again, we'll worry about it when it happens. Now, there are certain things, if there's a death in the family, that can come on all at once. And that's important to understand, right? We're not saying that if somebody in your family passes away, that was something that had built up over months, years, but when we look at what we see, the most of which is just high levels of chronic stress, high levels of what have been called diseases of despair, these are not necessarily these things that happen overnight.

In fact, in most cases they are not. And I think that we do not talk enough about what can you do on a given day that is good for your mental health. Not as things have gotten bad enough that you have to do something, but from a preventive approach. You need to be doing something to help you to manage decades from now, years from now, and even just months from now, that conversation has become much more popular as it relates to heart health. You want to eat a heart healthy diet. You want to exercise so that you lower your risk of heart disease.



**[00:25:18]**

But did you know that exercise has been shown in a number of studies to help prevent and potentially even manage depression? We don't talk about those types of things. And I think fundamentally, the thing that matters most in life, you can push against this if you like, is mental health. That is the primary outcome of interest. Everything else is a surrogate outcome. And the reason I say this is, consider everything that we care about, all the stuff that allows us to actually enjoy our lives, it is a reflection of mental health and mental health is a reflection of brain health.

And so if you think about what are the things that we do in a given day, we really should be asking ourselves, what can I do to sustain the best mental health I can over the lifespan? And that is absolutely not the way that most of us live our lives. And it's really not the way that our healthcare systems have been set up either.

### **Alex Howard**

And just to dig into that point further around these lifestyle factors. You mentioned sleep that feels like another we talked a bit about the points of diets and food, but that feels like another important piece here.

### **Dr Austin Perlmutter**

Great, yeah. So I'm often asked if there's one thing that a person could do to improve their brain health, what would it be and why? And we all talk about diet, exercise, all these things are important. One of the learnings that I had that is really, really vital to understand is that people do things that they enjoy. That sounds so simple, right? Of course they do.

But as it relates to behavior change, as it relates to getting healthier, the way that I was trained is kind of tell people what they have to do to be healthier. So if a person comes into the office and I believe that they need to get healthier, usually I would say you need to start exercising, you need to stop drinking soda, you need to start eating more real food.

These are not things necessarily that a person would enjoy. The reason people don't exercise is most often not that they really want to, but that they just don't have the time. A lot of people don't like exercising and I think we have to be honest about this. Similarly, when it comes to eating healthy food, it's not that people don't know that junk food is unhealthy.

It's not that people don't know that eating real food is what they should be doing. It's often that junk food tastes better. And we've all had unhealthy food, that slice of cake, it tastes really good. So the point I'm trying to make here is so often as it relates to how to create better health, we're focused on telling people what they need to do and the stuff that isn't really fun, that isn't really enjoyable. And our brains like to do things that are enjoyable.

So that gets to the subject you brought up and why sleep is more often than not my top recommendation for what I would say a person should do to improve their brain function as quickly as possible. So as background, if you get a good night of sleep, there will be a number of benefits that you get the next day.

**[00:28:29]**

First, the overall quality of thinking is better. Your memory is going to be better. So you'll remember things. You might be less reactive, less likely to lash out against a friend, a family member, a coworker. So that's a good thing. You tend to make better decisions around food.

And this is one that so many people do not know, is that if you skip one night of sleep, you will on average the next day eat over 300 or so extra calories. And it's not like you're going to burn those off energy wise. You will just eat the extra calories somewhere between 260 and over 300 calories the next day. You'll also preferentially select unhealthy foods compared to if you got a good night's sleep. I know this is true for myself. The early mornings when I'm at the airport, I am so much more tempted to eat that junk food than on the mornings where I'm well slept.

So this is really important. Just one night of good sleep can be the difference between a good day and a bad day as it relates to your health. And studies have shown that you can detect changes in activation patterns in your brain with as little as one night of good or bad sleep. So that's really important. But to get back to the earlier point, which is really, really key, eating healthy isn't always fun. Exercising isn't always fun, but almost everyone feels better after a night of good sleep. So this is a self reinforcing pattern in that we enjoy it. It helps our brains to say that was something that brought me pleasure. And if you can tether that to the health outcomes now you have a reinforcing loop versus creating healthy loops around food and exercise tends to be more challenging because there's more of the forcing yourself to do that.

With that said, there's several comedy skits, but Jerry Seinfeld does one talking about the night you versus the morning you. And the morning you is always upset with the night you because the night you wants to stay up and watch one or two more episodes and the morning you gets up and feels really sleepy.

You've got to be able to bridge that gap. So I think it's really important to focus on sleep hygiene as kind of a central way to help improve the quality of your sleep. And what does that mean? We can go into the details, but what I recommend to people focus on consistency. So between five and six nights of the week, you want to be in bed at the same time and get up at the same time.

It's really important. It's linked to higher quality of decisions, higher quality of overall brain health. So looking at consistency, you want to look at making sure that you are getting good light in the morning. So you want to get some sunlight in the morning, if you can. And you want to minimize blue light in the hours before bed.

Blue light is stimulating, suppresses melatonin production. You want to look at temperature quality. So I can't do the Celsius conversion off the top of my head here, but in the Fahrenheit world, we're talking about mid 60s. So I don't know if you have that conversion, but for people who are across the pond.

### **Alex Howard**

I can work it out. I think it, hang on, you keep talking and I'll jump.

### **Dr Austin Perlmutter**

We'll get real time calculation.

**[00:31:29] Alex Howard**

Here we go. That's about 15 degrees Celsius.

**Dr Austin Perlmutter**

Perfect.

**Alex Howard**

Yeah.

**Dr Austin Perlmutter**

So you really want your body a little bit cooler at night and that's important. And then other things to consider and one that I'm always trying to remind myself. Stimulating conversations and media in the hours before bed can rev up your brain and make it harder to fall asleep. So try to stay off your phone, especially try to stay off reading the news, watching the news. And even if you can, which I know has been a challenging one for me.

If you live with a partner and you have stressful conversations at certain times of the day, try to save those for a time that isn't right before bed. Because I have found that once you get those thought loops wrapped up, it's much harder to bring them down. So again, sleep fundamentals for brain health, probably my top recommendation as far as something a person can do that can make their brain function better overnight, literally and is sustainable.

And as you look at ways to improve your sleep quality, really look at your sleep hygiene means pay attention to the hours before bed and create a relatively stable program where you're paying attention to your light exposure, where you're paying attention to the stressful media that you consume, the stressful conversations you consume.

And trying to get in bed around the same time every night for five to six days a week around that temperature range that we talked about. And that'll do a huge number of great things to improve your sleep quality.

**Alex Howard**

One of the things, Austin, that can also be challenging is that we get in these habits and patterns. So you're talking there about some behavioral change which if people make, is going to make a meaningful difference. But of course, the routines and the habits that people have can often be hard to break. I'd love you to say a few words about the role of neuroplasticity in this and also how we can drive that kind of habit change.

**Dr Austin Perlmutter**

For sure, I'm glad we're talking about this as it relates to the most powerful tools that we have for improving our state of brain function, brain health. I think habits are at the top of my list. And the reason I say this is because coming back to a point I made earlier about our kind of identity being tethered to our brain state.

**[00:33:46]**

We tend to believe a couple of myths about our brain health. And one of those is that our decisions that we make are a sole reflection of our conscious brains. So let me break that down. If we do things over the course of the day, there are conscious decisions we make. So you might weigh the pros and cons of what you're going to have for lunch.

You might have a conversation with your significant other about if you should go to a show before dinner or whatever. These are conscious decisions. It turns out that probably 40 plus percent of the choices we make in the day are unconscious choices, meaning that we're not really thinking about them. For example, how many times are you going to brush your bottom right teeth before you go to sleep?

You're probably not thinking, okay, I have to get 15 times on that tooth. These are unconscious choices. Or if you're driving in your car, you're probably not thinking about gas, brake, turn signal. These things still happen, you still are making a choice but it's below the surface of your conscious brain. Why is that so important?

If you think about our health is a reflection of our decision making, which it is then the more healthy choices you can make, the better your health will be. And that means the better your brain states the better your decisions, the better your health. If you are not paying attention to your unconscious decisions the absolute best case scenario is 60 or so percent of your choices in a given day are under your control which is not all that great.

So this can help to explain why a person really is trying to do everything healthy but they still find themselves turning into that fast food restaurant every day on the way to work. That is a habit your brain is used to turning right every time it seems to sign for that fast food restaurant. That's not necessarily something you're weighing the pros and cons.

It's an unconscious decision. Similarly, if your goal is to exercise after work but you find yourself on the couch watching TV with a bag of chips in your hand, that is an unconscious process that happens. So we really need to be conscious of our unconscious thinking. Now, there's something that you said here which is how can we break those habits? And I've been privileged to have conversations with several people who are really world experts in habits. And one of those people is Dr Wendy Wood. She's a researcher out in California, in the States.

And in our conversation it became clear and in her book that you can't just break a habit. It's not the way our brains work. You can't just dismantle it. What you have to do is replace one habit with a stronger habit. So that's really important. If you're doing something that you don't want to be doing anymore you can't just say, I don't want to do it anymore. That's not how the brain works. You need to find something healthier to replace it with. A couple of considerations around this one is there are certain times in our lives that are especially primed for rewriting habits.

And the best example here would be when things are changing. So if you're moving, if you just recently broke up in your relationship, if you have a new job that's where the brain is a little bit more receptive to shaking things up. And so these are awesome opportunities to do some reprogramming, to do a little bit of spring cleaning and to create new healthier habits that replace, they go on top of those unhealthy habits.

So we'll talk in maybe a moment about how you can actually reform healthier habits. But one thing I wanted to bring back in which you had mentioned before is this idea of neuroplasticity. And for

people who haven't heard the term before, neuroplasticity is basically the idea that your brain is constantly changing as a reflection of your environment.

**[00:37:48]**

Really, really interesting stuff if you think about how we tend to look at our brains, in my opinion, tends to be the way that we look at our bodies. So if you have a toenail, you see the toenail today, same toenail it was yesterday, maybe a little bit longer, you're growing a little bit and at some point you have to clip it.

But the brain is way, way, way more dynamic. So how do we know this? If you've been listening so far, you know something now that you didn't know at the start of this conversation. The only way that it's possible is because the brain has changed. Something has changed to enable you to have these new thoughts, these new memories. So here's the rub.

Your brain is always changing, not necessarily for the better. You need to direct that change for your benefit. And habits act through like everything that relates to brain change, neuroplasticity. So habits are one of the best ways to harness neuroplasticity for your benefit because they are the opportunity to reprogram your unconscious brain. So it's working in your favor and not against you. People like to talk about passive income, compound interest. That's habits for you. You want to get those on your team because every day they make you better without you having to spend your time thinking those through. Okay? So it's a lot of prelude to how you actually form new and healthy habits. So this comes back to a point I made before, which is your brain likes to do things that are enjoyable.

So to form new habits, you want to make sure they're easy, they're enjoyable and they're reproducible. All really important. Where people tend to fail with the creation of new and healthy habits is they come up with something like, I want to run a 5K every day. Every day this month I'm going to run a 5K and then I'll just be a runner and I'll keep doing it forever. So is that easy? No, not unless you're running the 5K already. That's not easy for most people.

Is it enjoyable? I don't know who these people may be, but for most people, myself included, I could maybe do one or two days and I would say, I do not want to do that. That's not enjoyable. And because of that it's not reproducible, right? Because you're not going to be motivated to go do it. And it's challenging to do that every day.

On the flip side, if you want to form a new healthy habit for exercise, it could be as simple as saying you're going to lace up your shoes and go outside each day and then you're going to give yourself a pat on the back and you're going to let yourself watch your TV show that evening. But ideally you want to reinforce it right afterwards. So there's a researcher named BJ Fogg and he says you want to really celebrate right after you do something healthy. So in his scenario you would lace up your shoes, you would go outside and then you'd give yourself a pat on the back where you do a happy dance.

The point here is it's easy, it's enjoyable and it's reproducible. You can do that every day. So these are the ways you want to build habits, you want to make them easy to do, you want to make sure it's something that you can do continuously. And it really takes, some people talk about a month or shorter, it really takes on average about 69 or so days to form a new habit.

**[00:41:01]**

So as you're looking at how to create these things you want to think about sustainability at roughly the two month level. If it's something that you think you can do for at least two months, that's going to be most likely to be programmed in your brain as a new and healthier habit.

**Alex Howard**

But then that means that you've got to start with something which is, as you say, is sustainable and achievable. Because I think sometimes the temptation is that as you've spoken to, we try to do too much too quickly and then we don't follow through and then it compounds this idea that I can't do it, I can't change, it doesn't work.

And sometimes I think people can feel that if I only make a small change it's not going to be enough to have an impact. And so maybe just want to say a few words about the power of those small changes, particularly setting up their new positive cycles. Like you gave the example around sleep, if we don't get good sleep we're less likely to get up and do those positive habits. That it's sometimes changing a few things that then creates a whole new momentum.

**Dr Austin Perlmutter**

That's absolutely right. And we live now in a world that loves to celebrate the people doing the extreme things, especially this is the case in health. So if you're not 100% keto or 100% vegan or running marathons or have the latest sleep technology and monitoring every aspect of your sleep, what's the point? And I would argue that that is absolutely opposite what most of us should be thinking about because as it relates to our health we need to not be thinking about losing the weight for a bikini season.

We need to be thinking about the next decades of our lives. And that is where compounding interest is so important. So we're talking about the 1% better, that is key. And if you look at how you can take back control over your brain it's the little things that are going to matter most.

So I 100% agree with this idea of finding things that you really care about that you think you can do that are easy to do and that are enjoyable. And so that could be in the form of diet, that could be in the form of exercise, that could be in the form of getting a little bit more nature exposure, doing a couple of minutes of meditation.

But I really think the sleep one, again, is a great place to start if you're looking to get your brain back on your routine, because there's so many excuses that we all make for sleep. I'll sleep when I'm dead. I need to do this one last thing.

If you set the habit of saying sleep is absolutely my priority and I'm going to decide to work backwards from my bedtime, 9:30, 10:00, whatever, it's kind of hard to squeeze out of that. You've basically done something that is very clear. So another thing about, ideally, goals is that they're very clear, well delineated and you're going to feel better the next day. You will. You simply will feel better and you'll think better, and then you'll be more likely to have interest in going to the gym, to have interest in eating those healthy foods.

**[00:44:19]**

And so there you get the compounding effect of the benefit of sleep. So, you know, to come back to your question, I 100% believe we need to celebrate the little things. So if you're out there listening and you are making one or two little changes to your health, maybe you're trying to cut back on drinking soda, maybe you're trying to go for a daily walk.

I celebrate you. You're doing fantastic. That's what we all need to be celebrating because frankly, we've come to a scenario where so many people are trying to defend that unless you take their extreme route, you shouldn't even try. And there's nothing that I can see from the science that would say, that is a good plan.

### **Alex Howard**

Fantastic. I'm mindful we're running out of time, but maybe you want to say a couple more words in summary, in terms of some of the practical things people can start with.

So sleep is clearly the number one. What's another couple of things that people can start with now that are watching this and going, right, I can see how trauma has shaped and impacted my brain health. I want to start to bring balance. If you could give us some of the key, kind of summary points from what you've been covering?

### **Dr Austin Perlmutter**

For sure. We'll start with the big picture, and that is we live in an age, in a society where bad health, and especially bad brain health, is kind of the norm. And that's very unfortunate, but it's the truth of the matter. And so while that's scary and while that's sad, it still should compel us to look for solutions. And I guess what I'm excited to be able to say is we now know there's so much that each of us can do to help bring our brains back into a healthy balance.

And there are a number of ways we can do that. We've addressed some of the core ways that I think are within most of our abilities to build into our days. So we've talked at length about sleep, we've talked about how to create new habits. I would say on the topic of food, which I think is really a vital kind of nutrient component of a healthy brain.

We talk about how food can change the brain but as far as kind of the most relevant dietary interventions that can support brain health, I would say that the diets that are best studied for improving brain function and health. And so looking at dementia, looking at depression, that's kind of the two areas where the research has been focused.

It's a Mediterranean pattern diet or the Mind diet, which is kind of a Mediterranean version of the Mediterranean diet. But I think the biggest thing that I would recommend for people to start with is to cut back on liquid sugar. And as it relates to these types of things we've been talking about inflammation, problems with neuroplasticity, problems with brain function, liquid sugar is kind of universally understood to be at the very best, neutral and for most people, quite negative for our health.

It damages our metabolic health, it damages our immune health and it's been linked to every process that we worry about for our brain function. So as a kind of first level hack, and I know that

again, coming back to my earlier point, this may not be super enjoyable, but I would say one of the easiest ways to start improving your overall diet is to look at liquid sugars.

**[00:47:47]**

So that's sodas, that's your sweetened coffee drinks, that's going to be basically any beverage that you're not in control of, people will sneak it in. The simple syrups. It is incredible how pervasive that sugar is. And what I recommend to people coming back to trying to make things less than painful is don't try to just drop the liquid sugar and sub it with water because it's not fun.

So instead, I recommend people look for sparkling waters. Flavored sparkling water is a great kind of one to one replacement. And if you can do that, you will then build on your track record of success and you can start thinking about some of the other dietary interventions that might be helpful.

But from a dietary perspective, I would say there's lots to be said for eating a diet that's rich in real foods as opposed to ultra processed foods. But I think the lowest hanging fruit is often to cut that liquid sugar and that would include juice in that, unfortunately. And try to either opt for sparkling flavored water as a starter. There's a lot of conversation about artificial sweeteners. We don't need to go into that right now.

But yeah, I think that's a great place to start with the dietary piece. The other things I would say is coming back to the exercise part, if you're not somebody who moves your body regularly, please don't decide you have to go out and run a marathon, walking, even stretching, these are amazing ways to start activating some of those systems in the body that are linked to better brain health.

And again, if you're doing that, celebrate it. That's a wonderful thing that you're doing for your body.

**Alex Howard**

Fantastic. I'm mindful we're running out of time, but I'd love you to say a few words about how people can find out more about you and your work and some of what people can find.

**Dr Austin Perlmutter**

Yeah, I appreciate that. The most consistent kind of work that I put out is my newsletter on brain health it's called Get the Stuck Out. And if you go to my website, which is [austinperlmutter.com](https://austinperlmutter.com), you can see all my previous newsletters in the form of blogs and you can get access to my newsletter where I put out a bunch of brain insights.

**Alex Howard**

Fantastic. Dr Austin Perlmutter. I really appreciate your time. Thank you so much.

**Dr Austin Perlmutter**

Thank you Alex.