Introduction and Guest Background

Welcome to this episode of the Reverse Alzheimer's Summit. I'm your host, Dr. Heather Sandison. And I can't wait for you to hear from Dr. Austin Perlmutter today.

He's a board-certified internal medicine physician and a New York Times bestselling author. He's also a published research and a phenomenal speaker. His mission is to help people improve their health by targeting the biological basis of “stuckness” in our brains and bodies.

His Writing, Presentations, podcast and online educational programs explore how environmental factors influence our cognitive and mental state. And he has reached millions through many outlets that you've heard of.

He is a co-producer of the Alzheimer’s, the Science of Prevention series and he's currently serving as the managing director at Big Bold Health a food-as-medicine company focused on helping people rejuvenate health through better immune function.

He's also running a first-of-its kind study exploring the effects of plant nutrients on human aging through epigenetics. Dr. Perlmutter, welcome. Heather Sandison, It is a absolute pleasure to be back here with you to have this conversation.

Always a privilege. So let's dove right into it. You're doing a food medicine project. And so I can imagine the answer to this question. But the biggest threats to brain health today.

Is it just diet or is there more to it? And if diet, what diet. What a good question and what a great place to start. You know, I think in general, as we have conversations around health, it is so easy to pick one villain and then make them the only villain.

I do think the food that we eat is a major contributor to rates of neurodegenerative diseases like Alzheimer's around the world. I don't think there's too much debate about that.

But if we were going to say, is it just the food? Is the food the problem?

Brain Health Beyond Diet

I would say the answer is definitely no. And where maybe we should begin is this question of saying, what is it that a human needs to thrive? What is it?

A human needs to have a thriving brain. And certainly you need the basic building blocks, right? You have to have the architecture of the brain. In order to have a brain that can thrive, it needs to be built out of high quality materials.

Those materials come from the food that we eat. So I do think this is kind of a core scaffolding for all of the brain outcomes we care about, not just dementia, but mental health.

But in the bigger conversation around things, maybe the most important variable that we tend to miss is that we need the right forms of brain connection for any of this to mean anything.

I sometimes will say you could get perfect sleep, you get perfect exercise, you could have the perfect diet, you could do an hour of meditation a day.

But if you don't have connection, it doesn't really matter. You just basically build a machine. So if you want to have a machine, your brain that not only functions well, but helps to bring you joy, helps to allow you to experience this

life in the best way possible.

Then it is also about the connection. To go back to your original question, though, the food is a fundamental variable in this equation, and by and large, most people are building their brains out of junk food, which certainly relates to having a poorly performing brain.

So where do you think people get off track as a start in utero? Does it start in in school? Where where do people get it wrong about brain health and how do we change that?

I think it's in all the places. I think, unfortunately, we live in a world in which health is not the top priority. And brain health is pretty far down the list.

Now, I would argue that the only priority that we should all be really thinking about is mental health. Mental health is the thing that matters. Without mental health, you don't enjoy life.

There's really not a whole lot of point of going up, getting out of your bed and going about the day to day. If your mental health won't let you enjoy the experience.

But we don't really act as though that's the case, by and large, each day. What we do is really based on short term kind of pursuit of pleasure. And we've set up a society in which that is normalized, where the typical actions that we engage in, in a typical day, are really things that, in the long run, completely take away from our brain health and from our mental health.

So I think that this issue permeates every aspect of how we engage with each other, how we carry out our day to day. And it all kind of comes down to what are our top goals in life.

I think if you were to ask somebody that eventually you would get to something along the lines of, I'd like to be happy. And really what that means is I would like to have a brain that allows me to be happy.

I would like a brain that is program towards contentment, satisfaction in life. But if you were to then look at that same person's day to day and the actions they took, the foods that they ate, the interactions they had with other people, you could ask, Are these the things that have any correlation with what they're saying they care about, which is long term happiness?

And I would say that the answer is probably no. So at a very fundamental level, I think the thing that we get wrong about brain health is that we don't actually live our lives in a way that does anything good for our brain health.

And yet, if we were to really push all of us, I believe would say that brain health is the most important thing because brain health is mental health.

Brain health is the ability to be in the moment to experience everything about life that is so incredible. So what do we do instead? We spend our days on social media.

Certainly we pursue GDP.

Sleep as the Foundation for Brain Health

Certainly we pursue financial validation. We pursue kind of this polarization that has become such a popular replacement for the interconnectedness that makes a whole lot more sense.

So existing on opposite sides of the political spectrum doesn't mean that people are evil. It means that people have different perspectives. And so we kind of have fallen into this trap where we are spending our time, are day to day, basically engaging in interactions and consuming things that we would say in the moment make sense, but are actually directly the antithesis of everything that is good for our brain health.

And in that I again include mental health. And so we know from an Alzheimer's perspective that social isolation, depression and anxiety are these modifiable risk factors that increase our our rates of dementia.

And so if you had to pick maybe three things to optimize brain health from a mental health perspective, what would they be? What could people start doing today or share?

You know, it's often really tempting to say that we can fix our brains right now. In this moment, you're going to take this supplement, you're going to eat this superfood and clear, smooth sailing for the rest of your life.

That's not quite how it works. However, there are things we can do that have rapid benefits to our brain health. The thing that I am most bullish on, if a person is going to say, I'm going to do one thing for my brain today, it is to prioritize your sleep tonight.

And I can't say this enough because when I look at things both that work and that are readily available for the average person and that are enjoyable, sleep is absolutely at the top of the list.

Eating a healthy diet will for sure have a good impact on your brain health. But it's not always going to be fun, right? The food that tastes best to some people is the food that is worse for their brain health.

Similarly, we know exercise is one of the most powerful interventions for better brain health, but it's not always enjoyable. I think we need to be truthful about this.

It's not fun for certain people to go out and go on a long walk or go on a run. And we see these things as doctors. Why don't you just go exercise as though the reason the person wasn't exercise is exercising is because I didn't think of it.

People know exercising is good for them. People know that going through the drive thru and getting junk food is not good for them. We do these things because they're easy and because they're enjoyable.

Meaning staying on the couch and eating junk food as opposed to going for a walk and cooking a healthy meal. But with sleep. And what I love so much about sleep is that it feels good to get a good night of sleep and it immediately enhances brain function.

The next day, after getting a good night of sleep, you're going to be more focused. You're going to have better memory. You actually may have better interactions with other people.

You may make better decisions. This is what the research is telling us, because we know that when people are sleep deprived, the exact opposite thing occurs.

So I would say you're going to hear a whole lot of hype if you go on social media, you're going to hear about the latest products that are going to fix your brain.

If you haven't paid attention to your sleep, all of the other things should be secondary because empowering your brain with a night of better sleep is going to help you to make better decisions around everything else.

So it is probably the most powerful feedforward mechanism. Now I will say go ahead. Well, I think we can all relate to this. This is such a relatable thing, like how nice it is to feel refreshed if you're are sleeping in on the weekend and how alert you feel compared to the difference of being, say, jet lagged or having sleep deprivation from pulling in all nighter for whatever reason.

And so that it's just thank you for sharing that because it's so relatable and something I think that people can take action to do right away. Excuse me. I interrupted you.

Absolutely. And I'll just say, if you take one thing away from this conversation with me, it's that prioritize your sleep tonight. And I know some people have little children.

Some people are on night shift schedules, some people have homework. They need to stay up late. And do I do appreciate that. You know, in residency and training, there were some nights that there was just no way that I was going to get enough sleep.

And some nights that I was working nights and then you had to transition between day and night. And I appreciate that. But what I will say, despite that, it doesn't change the fact that getting a good night's sleep is about the best thing you can do for better brain health.

And so this doesn't have to be this incredibly complicated thing. I know people love to talk about this 95 step routine, but this is, I think, the exact opposite of some of what we're going to see as far as, oh, you need to wake up at 4 a.m.

Microglia, Inflammation, and Dementia Risk

and do 3 hours of meditation. What I'm saying is no. What I'm saying is your goal is to get 7 to 9 hours of quality sleep. That is the first step, the first goal.

And in order to do that, it turns out that the tips that we can relate here are very basic things. So what do you do? You cool down your bedroom habit, you turn off the lights, you wind down for a couple hours before bed.

So you're not scrolling on your phone right before you get into bed and worried about the news or your social media feed. And you give your brain the opportunity for that good night's sleep doesn't mean you're going to get 9 hours of deep sleep, but it does mean that you have done one of the most important things you can do to prioritize your brain health.

So that is me on my soapbox basically saying that I'm not financially incentivize to sell you sleep. I don't have any sort of a stake in how well you sleep tonight other than I know that that is one of the best things that you can do for a better brain tomorrow.

I'm curious about the brain's immune system that certainly is affected by how much sleep we get and how does that relate to dementia and dementia risk?

Sure. When we look at things that are now believed to be some of the principal drivers of dementia, and we'll kind of stick with Alzheimer's here because it's the most common form of dementia.

We talk about a number of different pathways within the brain, and historically we've been talking about amyloid and how. But now that research has been expanded a little bit and I kind of like in this to what we've seen around longevity.

So at one point we had less than ten of these key drivers of aging and longevity. Now there's 13, and next year they'll be 22. But when we look at Alzheimer's disease, I really am a proponent of some of the models posed by Dr.

Brunson and others where we're looking at a number of different factors. But one of the core factors that is thought to contribute to Alzheimer's, dementia and really all kind of neurodegenerative diseases is the idea that inflammation in our brain can become dysregulated.

And when that happens, we can damage our neurons. We can have a harder time kind of allowing our neurons to rewire themselves and for us to recover from problems within our brain.

So all of this kind of centers around a couple of concepts. One of those concepts is that the immune system within the brain is a highly active and interwoven set of signals and cells that influences every aspect of brain function.

When I was learning about the brain, even in pathology and histology, we almost exclusively focused on the neurons. And I think that's really where most people's conversation ends as they're thinking about the cells in the brain.

Neurons are awesome. Don't get me wrong, you have something like 80 billion neurons in your brain. Depending on the estimate, it goes up or down. But this is a really interesting fact.

Only half of the cells in your brain are neurons, right? So of all of those cells that we think about in the brain, this incredible galaxy of cells, only half of them are neurons.

The other half are called glial cells. And this comes from the word for glue, because initially it was believed that these glial cells just held things together.

They were just the glue. They didn't really participate. They were just there to kind of provide structural support for neurons. Now, we understand that these glial cells are incredibly important for every aspect of brain function and one group of glial cells that has been shown to be super interesting but also very relevant to conditions like Alzheimer's disease are called micro glial cells.

Very interesting name, basically just meaning small glial cells. But the more important fact about these micro glial cells is that they are immune cells that live in your brain that make up around 15% of your total brain cells.

Probably something like 20 billion of them. And they are tasked with regulating your brain's immune and inflammatory state. So that's a lot of kind of background science to get us to the point of understanding that when your micro glial cells are angry, when they're inflamed, they actually create this feedforward cycle that creates more damage within the brain.

And it's now been hypothesized that these types of changes in micro glial cells may be one of the major drivers of Alzheimer's disease. One of the kind of questions and issues that has puzzled people for some time is we say, well, it's one thing if you have inflammation somewhere else in your body, we might even say you could have inflammation in the gut, but how does that get to the brain?

Because you have a blood brain barrier in theory that is supposed to keep out things like microbes and unhealthy signals. They stay in the blood. They don't get into the brain.

So that helped people to have this belief, this myth that the brain didn't have an immune system, that the brain didn't participate in immunity. Turns out that there are so many ways in which what happens in the body reaches the brain and can reprogram the brain's immune system.

Altering these microglial cells and in doing so, altering the fate of our brain. So there are pathways like the vagus nerve, which runs from the gut to the brain that speaks to these microglial cells.

The blood itself can carry signals like short chain fatty acids, as well as those that are more concerning, like lipopolysaccharide that can activate these microglial cells and in doing so promote inflammation in the brain.

And I do want to be very cautious here, because it's often the case when we talk about inflammation, that we go down a path of saying inflammation is bad and that is not true.

Inflammation is not only not bad, it's actually essential. It is a key pathway necessary for our survival. Without inflammation, you would cut your finger by walking down the street on a branch and succumb to a bacterial infection, and that would be it. So we need inflammation.

But the real key of this whole conversation is chronic inflammation, which is perpetuated by the change in the state of these micro glial cells in the brain is not only thought to be a major driver of conditions like Alzheimer's disease, but is modifiable by the steps that lifestyle modifications that we make each day.

So I think this has kind of changed the game as it relates to why does food matter? Why does sleep matter? Why does exercise matter in the brain? Well, a big part of it is that they act on these micro glial cells.

They change these pathways that the microglial cells act on. And in doing so can either protect our neurons, can

protect healthy neuroplasticity, or can have the exact opposite effect.

And so what I hear you describing is sort of this self-perpetuating thing. They get turned on and then they stay on potentially. And so how how do we reduce this microglial activation now, or do we want it there to kind of hear both things in this conversation?

Sure. I think this is still kind of at the forefront of medical exploration, which is what's going on with the micro glial cells and what we want to have going on with our microglial cells.

One of the reasons for this is it's kind of hard to see what's happening to our microglial cells in real time. So most of the research here is either done on animals or it's done kind of postmortem.

There are various markers you can look at like TSP. Oh, that can give us a sense as to what's happening with our micro glial cells. But really what we're trying to find out is what happens to our microglial cells in real time in response to either for the better or for the worse, what we're doing in our lives.

What I will say is the consensus seems to be that we do not want our microglial cells to switch on an inflammatory state and stay in that state too long.

We do want them to be able to switch back and forth from an inflammatory at an anti-inflammatory state in order to respond to whatever threat is in our environment.

This is really like the immune system as a whole is kind of what we want. We want an immune system that responds to you and reacts to a threat but doesn't go overboard because going overboard if you're an immune system isn't just inflammation, it's autoimmune disease, it's allergy.

So we really want an immune system that is well balanced and able to handle the threat and then go back to a state of readiness. So what do we know about micro glial cells?

As far as what kind of pushes them towards an unhealthy state? Some of the more important variables would actually be environmental exposures, specifically environmental toxins.

And a lot of research has been done recently on air pollution and how this might contribute to Alzheimer's. Recent reports, including one from The Lancet, have now described air pollution as one of the major contributors to Alzheimer's disease.

And it may be that the reason for this is actually this unhealthy activation of microglial cells. So this is one example of one side of the equation, basically saying how do we reduce the amount of things we're taking into our body that are teaching our microglial cells to get inflamed and stay inflamed?

And I think that this is it's core to this conversation. It's one thing to say how do we bring them back into balance? But some of the more powerful strategies to do that are actually to decrease the things we're feeding them that are knocking them out of balance.

So some of the things that you can do are to reduce your exposure to air pollution.

Psychedelics, Neuroplasticity, and Mental Health

We can go into that in detail, but I think that's actually a hugely overlooked variable specific to brain health that all of us can do a better job at, especially with in our homes.

Another one is going to be the food. So generally speaking, there's mostly preclinical data at this point suggesting that certain dietary patterns may activate a proinflammatory microglial state.

And really what we're talking about here is the standard American diet, a diet that is rich in ultra processed food. So

eating a diet that contains more real foods is a great way to not only give your microbial cells better signals, but also reduce the amount of these inflammatory signals that will then create more inflammation in the brain.

Another variable that I think is hugely overlooked is that when we are consuming things that can influence our brain, maybe we focus a lot on the food.

Certainly that's one. But what we consume through our eyes and through our ears is a direct conduit to our microglial cells. And think about this. When you are watching a piece of stressful content, when you are hearing about something that is incredibly scary, this is actually telling your brain and including your microglial cells, it's telling them there is a threat on the horizon.

There is danger on the horizon. So your brain responds to that by revving up inflammation, which is a practical thing to do, because going back to the example about what inflammation does, it is a protective mechanism, but our brain can't necessarily differentiate between a real or just a kind of out in the world stress.

It still sees those two things the same way. Chronic stress within the brain is linked to activation of these micro glial cells. So anything we can do to reduce unnecessary chronic stress and I'll be clear, there are chronic stressors that are necessary is a good step.

So we talked about a couple of things here. So one is the air that we breathe, what we inhale through our nose and I guess through our mouths, if we're a mouth breathing, then we've talked about what we consume through our eyes and through our ears.

And then, of course, the major variable that I've just described kind of tangentially is the food that we consume. But to that end, decreasing our consumption of ultra processed food and bringing in variables and specific foods potentially that can quell and even switch our microbial cells towards an anti-inflammatory state.

That makes a lot of sense. What you just described are things that come in through our are cranial nerves, right? Cranial nerve roots, which are our sense organs, our ears, our eyes, our nose and our mouth.

And that's part of our brain that those sense organs are this extension of our brain. And so it makes a lot of sense. There's a direct path into the brain that can either turn on the immune system and occasionally get out of or potentially get kind of self-perpetuating and get overrun the immune system.

Or it can send good signals that that promote health and wellness and good sleep and recovery and all of the things that help to reduce our risk for dementia.

So that makes a ton of sense. I thank you for organizing that that way. I never thought of it that way. There's more to it too, I think. Just to be clear, you know, you can have things that come in through your skin that could impact your brain.

You can have things that you smell that even though they don't consciously they create stress in your body, could still be interpreted by your brain as dangerous signals.

And I've been playing with this a bit, and I think a very helpful organizational principle around this is that the immune response and in particular inflammation is it's basically triggered by the belief that there is danger either imminently or on the horizon.

So if we can just think about what are the things that we're putting into our bodies that are telling our brains there is danger either now or coming?

These are things that if we reduce, tend to decrease our risk for developing chronic inflammation. So when we take away more of those, our brains are no longer thinking, Oh, there is extreme danger on the horizon.

And that actually is a signal to our microglial cells and to other cells like astrocytes and our neurons, to say we can

now focus on things like repair and making new connections, as opposed to just kind of dealing with the concern for this potential threat on the horizon.

Got it. So speaking of new connections, one of the areas of research that is known for neuroplasticity is the psychedelic research. So tell us a little bit about last time you were here.

We talked about there being a paper that was talking about psychedelic research for dementia. And since then there have been some updates to that and some new studies.

I know that they're currently recruiting for a handful, but tell us about the updates and solutions in terms of using psychedelics for dementia. One of the aggregating principles that I've really started to to believe in more and more is this idea of food as medicine.

And I think that people can have issues with this for a number of reasons. You know, certainly if you eat a piece of kale, it's not going to have the same effect as if you were to take a beta blocker.

And certainly if a person's coming into the hospital with a unstable cardiac rhythm, you're better served giving them an antiarrhythmic drug than you are to, I don't know, pull out a carrot.

But one of those antiarrhythmic drugs might be digoxin, which comes from the foxglove plant, which occurs naturally. So there's overlap as it relates to brain health.

We can certainly talk about food as medicine in the context of preventing Alzheimer's disease and potentially even reversing some of those symptoms once they start talking about moving somebody from an ultra processed diet to a mediterranean or a mind pattern diet.

But to expand this conversation a little bit, if we think about what psychedelics are, I mean, these are kind of an interrelated set of molecules that have occurred naturally for, I mean, probably millions of years, but have been used by humans for thousands of years.

And they've been really used for kind of these ceremonial and ritualistic instances because they have a direct and pretty objective effect on brain chemistry and therefore on cognition, on mental state.

Where do these molecules come from? Well, they occur naturally in certain plants. They occur naturally in certain animals, and they also occur in fungi.

And what makes that interesting is that often these molecules are consumed along with the plant or fungus that they were originally found in. So this is the case with ayahuasca, which is kind of a combination of two plants from the Amazon.

This is the case with psilocybin, which comes from a host of different mushrooms. And these are foods that, when consumed, happen to contain these highly active psychedelic molecules.

Now, that is really interesting to me because I think it changes the dynamic as it relates to this bifurcation of what is a food and what is a medicine.

We now find ourselves in an era where, unsurprisingly, everyone is trying to commercialize psychedelics and trying to isolate molecules and create variants on them for which they can get a patent.

But the truth of it is just like one of the reasons why it's a supplement is generally not my first go to if you can get it from a food. There are things that are lost when you pull these things out of their natural setting.

And I don't mean just taking away the plant or fungus that a psychedelic is found in, but also the context, right? So the sudden setting matters a lot.

Now, with all that said, I think what's very interesting about Alzheimer's and about neurodegenerative diseases and really brain function in general as it relates to psychedelics, is that we appreciate that the effects of psychedelics on the brain are long lasting and have effects beyond just mental state.

So they change how people see the world. They can change how we think about things, which speaks to the fact that something is going on beyond just the short term drug.

HAI Which some people would kind of try to boil down these molecules into. And so if something happens to our brains, which seems to in many cases have a positive effect in people's lives.

Now, coming back to the point I just made here, as far as the duration of the effect, historically, when I look at the most powerful medications we have available for Alzheimer's, for depression and so on, these are things that people have to continue to take.

They either are taking a daily pill or they're coming in for an injection once a month. But the expectation is that for these things to have an effect, you need to make sure you have enough in the system to where you get to a level to get a clinical efficacy.

And so with the conventional antidepressants like an SSRI, that might be 3 to 6 weeks before we know if these are even working. On the flip side, with the psychedelic molecule, you can see pretty quickly that there is something happening, these placebo controlled trials where they give people niacin.

And I've always just kind of gotten a little bit of a kick out of it because there's a pretty big difference between psilocybin and niacin. I think we could probably guess who's on which of those two molecules.

So these are molecules, these psychedelics, where after a single dose we will see an enduring response and a sizable percentage of people as it relates to their mental state.

And we've seen this in particular in the end of life research that's been done with psilocybin in the collaboration between researchers at NYU and Hopkins showing that years after that single dose, people still had an enduring antidepressant response.

So with all of this background in context, it speaks to the fact that we're not just talking about activation of a serotonin receptor for an hour or two, meaning until that molecule goes out of the bloodstream.

So what is happening with psychedelics and how will that map on to some of the things that we've just scratched? Well, we now know that psychedelics can act on immune related pathways, which means that psychedelics may act on these micro glial cells in the brain.

That's really interesting in and of itself. So psychedelics may have anti-inflammatory effects or immune modulating effects. And I think that's really interesting because psychedelics are in fact, a stressor could be seen as a danger signal, but through a process called or misuse may actually in the aggregate, just like exercise, have an anti-inflammatory effect on our brains and in doing so may actually act on some of the pathways that are driving conditions like depression or Alzheimer's disease.

I want to go back to that point there for just a minute, talking about exercise. Exercise is a potent inflammatory intervention. When people exercise, you increase levels of inflammation as measured in their bloodstream, specifically interleukin six.

We would say that's bad. And that interleukin six is an inflammatory molecule and inflammation is bad. And yet in the aggregate, what seems to happen is a net anti-inflammatory response.

So there's an interesting thing whereby our brains, our bodies have actually adapted to wear short doses of stress, can actually, in the aggregate be distressing and may actually suppress chronic inflammation.

So that's one part. There's more to this story. There's a sigma one receptor that's located in the endoplasmic reticulum that can be activated by molecules like DMT, kind of a core constituent of multiple classic psychedelics that appears to have both metabolic and immune outcomes when activated.

And there's also a whole lot being studied now as it relates to how psychedelics may act on neuroplasticity, the rewiring of our brain. And this is actually believed to be one of the most powerful ways in which psychedelics can create these enduring effects.

So that's really interesting for Alzheimer's, a disease in which it's been shown that there are issues with neuroplasticity, both in the creation of New neurons and in the rewiring of our brains towards more adaptive patterns.

So if we can act on that using psychedelics, that could really be a powerful way to have some positive effects and potentially even reverse certain aspects of what kind of makes Alzheimer's so challenging.

The last thing I'll say, and I know I'm saying a lot on this topic is when we look at the overlap between conditions like depression and Alzheimer's, it is significant.

So that speaks to the idea that there are shared pathways. Maybe it is the problems with neuroplasticity, maybe it is the increases in inflammation, which are seen in both depression and in Alzheimer's disease.

But psychedelics appear to have the ability to act on some of these shared pathways. So it isn't as though a person gets depression and they have one set of brain cells that are involved and another person gets Alzheimer's and it's totally different cells.

Our brains are a whole lot more interwoven than that. So psychedelics seem to be one of these interventions that have the possibility of acting on kind of a a large group of these pathways.

And this is what gives me a whole lot of hope around these things, because we're now seeing that they've not only been stigmatized in conversations around the dinner table, but in many states and many counties and increasingly around the world, we're seeing that they have been decriminalized and now we're even seeing legislation in certain places to study how these molecules can be used primarily for mental health right now.

But I would imagine in a couple of decades, these could be part of an Alzheimer's prevention and treatment protocol. Yeah, I've seen recently that there are big institutions like John Hopkins and several others and Pacific Neurosciences to they're recruiting for trials here in California using psychedelics.

And primarily what I see the connection with Alzheimer's, as you mentioned, is around mental health, is treating the depression and anxiety that comes and that sense of isolation that comes with dementia.

And now it goes both ways. It's kind of this two prong thing. We see that depression, anxiety and social isolation put you at risk for dementia. But then once you have Alzheimer's or dementia, you have higher risk of social isolation, depression and anxiety.

And that's where I see the psychedelic research at the moment in terms of what the studies that people are recruiting, institutions are recruiting for.

So that makes a ton of sense. But then to hear you put it in the context of, oh, the immune system plus the neuroplasticity, there's a lot of ways that this one intervention could potentially benefit people who are at risk for or struggling with dementia.

I do think in the context of the conversation around connection as a whole, there's so much that can be said around not just psychedelics but other kind of interventions that help us to connect.

So as you've just said, social isolation is a major risk factor for both dementia and for depression. And I think if we

were just going to get to the core of it is we need to be almost all of us.

And there are people for whom this is not true, but almost all of us need to be in a social network, not the digital version, but a real social network to enjoy life, to fullest.

And this is also evidenced in the fact that people who are lonely or die earlier get more heart disease.

Connection, Pets, and Mushrooms

Our bodies just kind of start shutting down when we don't have that meaning, that purpose, that social connection. And so it's very interesting to me that certain psychedelics can dramatically increase of empathy for and social connection with other people and with nature, which I think is super interesting.

So what's happened in particular? It's been shown that people who use a single dose of psilocybin or people in general who use psilocybin feel more connected to the natural world, which I think is hugely missing in our day to day environment.

So the connectedness piece seems to be kind of a major kind of through line to what we're describing here. It is incredibly protective when we feel connected.

And yet, despite all of our digital connections, people feel more disconnected than ever. Psychedelics offer one opportunity for certain people to be able to become more connected to themselves, to feel more in community with others.

And one of the things that I really appreciate about the culture that's developed around psychedelics, granted, there are pros and cons of this, is that there is this deep throughline of connection with people that you can both understand resonate with, and also very quickly drop into meaningful discourse with around these types of transcendent states.

So in some ways it's kind of democratized what has been historically only allowed to be possessed by some people, but it allows us to connect with something bigger than ourselves, to connect with other people and to connect with the natural world.

And I think all of that is is really interesting and independent of what that's doing to the immune system. Because, by the way, loneliness may create inflammation.

It is something that is super powerful. I would also just like I'd also just like to say one thing here. So I am not trying to advocate for everyone to run out and use psychedelics.

What I'm saying is there are certain pathways that seem to be at play that are important for all of us to pay attention to. And psychedelics are one of the interventions that seem to act on that.

So let me just provide something that is completely unrelated to psychedelics, but also acts on some of these pathways and it is having a pet pets provide connection.

And several studies just published in the last year show that there is a protective effect from pet ownership on dementia. And I think that's really important because I may ruffle some feathers here.

But interestingly, in one study, it was only shown for dogs and not for cats, which suggests there may be certain types of connection that are more meaningful than other things not to take away from cats.

They're wonderful in their own way. The study showed any type of pet, so there is that kind of buffer for those who are worried that their cockatiel or snake may not be as efficacious.

But the point being here, there are many ways to find connection. Psychedelics seem to be one way for certain

people. Yeah, I wanted to sort of echo that and say if you don't have access to psychedelics, it's not something that feels right for you.

Go for a walk with a friend outside, have a meal. Have a healthy meal with with someone that you've been wanting to connect with and you know, can consider ways where you can increase connection and make healthy choices.

There's a lot that we do have access to. And so although we're discussing those things on the very cutting edge that we need more research around, we want to keep you all abreast of that and excited about it.

But don't worry if you don't have access, there's a lot of these you can get the benefits of this type of thing, even mushrooms, dietary mushrooms, Lion’s mane.

There are things that have maybe not the entire psychedelic effect, but these nootropic effects, these brain healing effects that you can start today.

Well, I would say on that front, and granted, I'm hugely biased because it's something I love. Foraging for edible mushrooms in a safe way is actually an amazing way to connect with community as well as to connect with nature, because you go out there and you have to start reading the signs, the trees, the bushes.

You have to know about these relationships, these symbiotic relationships between trees and the mushrooms, the fungi, the mycelial network. So I think mushrooms are an amazing entry point for people to go in many different ways, but it doesn't have to be the psychedelic way foraging for mushrooms is an absolute joy, and it's an incredible way to connect with an audience of people who are maybe a little bit quirky but can provide some really amazing social connection is something I've personally enjoyed.

I love that you said that my mom watched the movie Fantastic Fungi and then she got into a foraging group and made a ton of friends. And it's just been a blast for her. She loves it.

Where to Learn More

I love that you offered that. So please tell our audience where they can find out more about you. I know you have a book and I please share. Sure. My website is austinperlmutter.com and if you're interested to learn more about what I'm doing with Big Bold Health, this food is medicine company.

It's bigboldhealth.com. I guess the easiest way to keep up with what I'm doing is to go to my website austinperlmutter.com and check out my newsletter.

I try to put out something every week and it's usually a take on some of the more recent evidence around an interesting topic. So last week's was how pets may help prevent dementia and top of mind.

Well and also you have brainwashed which is a phenomenal book for anyone who's interested in digging more into how our behaviors affect our mental health.

It's also true. That I can't let you get away without sharing that deal. Thank you so much, Austin. It's been an absolute pleasure having you. And I've learned a time and I know that our audience has as well.

Thank you for your time. Heather. It is always a pleasure to be with you having these conversations and I'm looking forward to the next one.