How To Prevent And Reverse Dementia Transcript

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Introduction to Dr. Perlmutter and the summit

Welcome to this episode of the Reverse Alzheimer's Summit. I'm absolutely thrilled to be introducing you. Probably Re-Interred in you to Dr. David Perlmutter.

He is a conventional neurologist, a medical doctor, and very well trained in the field. He's also a legend in the functional medicine integrative medicine field as well.

And I'm just really pumped to be telling you guys. I'll sharing with you all some of his takeaways from the books that he's written, as well as helping us integrate these perspectives of conventional neurology with what we know is the best in lifestyle medicine to help prevent and even sometimes reverse dementia.

Dr. Perlmutter, welcome. Delighted to be with you today. Thank you for having me. You're also the host of the Empowering Neurologist podcast. So you do a lot of these interviews and I'm just really excited to dig in to some of these exciting kind of pieces that are on the edge of what we know in the scientific community.

So let's dove into this conventional perspective first. You are, like I said, a neurologist, trained as a function, as a neurologist, and then have that functional medicine training on top of it.

And how do you see the integration of things like pharmaceuticals helping to support those who are also adopting these functional medicine interventions?

I think it's an excellent question because, you know, there's a notion of what is called alternative medicine, where you choose one or the other. And then the idea of so-called integrative medicine, where you really take the best of you, you certainly open the door to mainstream intervention, be it surgical or pharmaceutical, but you also recognize that they're not so necessarily mainstream interventions, like looking at somebody diet and other lifestyle choices may have important traction as it relates to what you're trying to accomplish.

And I like that model because it really doesn't take anything off the table. I mean, I know the the focus of our time together today deals with the brain and I think more specifically Alzheimer's.

And that said, we don't have any meaningful pharmaceutical treatment today, as you and I have this conversation as it relates to Alzheimer's disease now affecting 6 million Americans with cognitive impairment now affecting one in three seniors.

You know, this is a global issue affecting some 55 million people. So it is a pandemic in every every sense of the word. It is almost a uniformly fatal situation.

More people die of Alzheimer's right here in the United States every year than die of things like breast cancer and prostate cancer combined. So it's a very real but undercooked issue and it's not going to be overlooked.

Once there is a meaningful treatment, then we'll all talk about it.

Integrative medicine and the limits of Alzheimeru2019s drugs

Well, we need to talk about it right now for, you know, those of us in my field of neurology, those people who have family members that have suffered with Alzheimer's, including myself, dealing with my father.

It's a very clear and present issue that is extremely overlooked. And again, I think it's overlooked for a number of reasons. Number one, we don't have a treatment.

When there's a meaningful treatment, suddenly there will be a lot of attention shown upon it. And maybe it sounds a little bit cynical, but I think that there is some degree of truth to the notion that we tend to pay less attention to diseases that involve women and Alzheimer's.

Two thirds of patients are women. And, you know, I think, you know, at least historically, women have not been the subject of medical research. It's really been research done on men.

And then they extrapolated the data for women and children. But I think perhaps that explains it. But I think the short answer to your question and that I've given the long answer, why don't I give the short answer?

But the short answer is I absolutely keep the door open for a pharmaceutical intervention. That may be helpful, but we know that other aspects of so-called integrative care are hugely influential upstream in determining who will and who won't get this disease.

We know that it is primarily a metabolic consequence. A consequence of metabolic disturbances. And as such, the other issues that have been targeted, for example, by the pharmaceutical industry are manifestations of this issue with brain metabolism, even published in the Journal of the American Medical Association back in January of 2020 was a study or paper, an editorial entitled Alzheimer's Research Glucose Metabolism Moves to Center Stage from JAMA, and that's pretty mainstream aspirin.

So, yes, there's an accumulation of beta amyloid, but targeting it isn't necessarily targeting the underlying problem. Yes, there's a lower level of a brain chemical called acetylcholine in the Alzheimer's brain, the so-called cholinergic hypothesis.

But efforts to increase the acetylcholine, as if that was were the cause of the disease, have failed. So I think we need to go upstream there was a great quote from Desmond Tutu.

I'm going to use in my expert and I'll paraphrase it says something like, you know, it's time we stop concentrating on pulling people out of the river and go upstream and ask why they're falling in.

And I love that because, you know, it it kind of follows falls on the heels of John Kennedy's quote that the time to fix the roof is when the sun is shining.

And then, you know, we have that opportunity right now. We look around America and we see just an incredible increase in metabolic dysfunction. Only 10% of American adults is intact.

From a metabolic perspective, what are the downstream consequences? Alzheimer's, cardiovascular disease, diabetes, obesity, etc.. So we really need to take a step back and ask what are we doing in our lifestyle that is so threatening to our metabolic health and may very well lie upstream of these other manifests actions that are seen to correlate with Alzheimer's?

And we should pay attention to this. Yeah, this is such an important point that you bring up as rape affects the roof, the sun is shining, and part of the reason is because it's so good and it's also such common sense.

Right. And yet I think my clinical and professional experience in this space has been nobody wants to think about Alzheimer's until they absolutely have to.

Right. No one wants to imagine that in their future they're going to end up in assisted living or in memory care, or they're going to end up losing their dignity, unable to use the bathroom by themselves, or get dressed in the morning and so that thinking of that reality, it's not something we are willing to even go towards. And unfortunately, I.

Yeah, go ahead. Well, no, I just said, you know, went when the CDC published a report indicating what what is your greatest fear healthwise. It wasn't heart disease, it wasn't cancer, it was dementia.

It was exactly what you just described of being unable to care for you are so-called activities of daily living in personal hygiene that is most threatening to people and is so evident based on a lot of literature that's coming out right now as we speak that shows the incredible impact of lifestyle changes or choices on the front end that can dramatically impact your risk for Alzheimer's or and or cognitive decline even in those who carry the so-called Alzheimer's gene, the APO, E4, alil, that, you know, people look at that that's 20 to 30% of the American population.

They look at that and they feel as if they're condemned. Well, you know, that's not what our research is telling us. We're learning that we can dramatically offset that predisposition by carrying that gene.

You're predisposed, perhaps increased risk, but you're not determined to go down that road if you make certain changes that are positive as it relates to your lifestyle, therefore your metabolism.

I think this is such an exciting conversation to have, right? When somebody knows that they are maybe APOE4 positive, either one or two alleles, it's there.

Your your podcast is called the Empowering Neurologists, right? Where it's this decision point where you can say, okay, I might need to work a little harder than my neighbor or my spouse, but now I'm motivated to do it.

I'm going to make these changes. I'm going to make these decisions. And it's really it's those small decisions we make every day about how much how many steps we take, about what we have for breakfast or what time we go to sleep.

Why Alzheimeru2019s is a metabolic disease

Those are the things that really add up over time and determine that actual phenotypic expression. Right. That what how the rubber meets the road when it comes to whether or not we have symptoms of cognitive decline.

So I'm excited to hear how you sort of organize yourself. We know that there are kind of modifiable risk factors. Some of those are in the Lancet. The Lancet had a 2020 commission report on Alzheimer's and dementia, and they listed, I think, 14 or 15 of these modifiable risk factors.

And I would argue when I read that paper, I was like, hey, I would add a bunch more to this list or maybe categorize them a little bit differently. How do you organize yourself around each of these pieces that we can toggle to reduce our risk?

Well, first, let me say, as you were asking that question and I was certainly paying attention, I promise, but I was just imagining a patient in the mainstream neurology office now experiencing mild cognitive impairment on his or her way, probably her way to full blown Alzheimer's.

And what normally happens is that the patient will get a prescription for a drug like Aricept cholinesterase inhibitor drug. And perhaps there's a discussion of one of the newer monoclonal antibody drugs that have been talked about as of late, that this is what we can do for you.

And, you know, there is no discussion generally about the other things we're talking about. These, as you just mentioned, these modifiable lifestyle factors that are hugely, hugely impactful.

And I would submit that, again, in the spirit of the time, to fix a roof is when the sun is shining, that this is a discussion that happens before that patient is suddenly forgetful of her grandchildren's names and birthdays, which echoed whatever it may be that this is an attempt to keep you even out of that river, not to try to pull you out of the river.

That's where we need to emphasize our interventions, because that's where it's going to be most impactful in terms of that patient's health, most impactful in terms of cost, and certainly most impactful in terms of the heartache that is borne by family members.

So so let's talk about then those issues and, you know, lifestyle factors. We could we could probably list 20 or 30 that we can modify that may have an impact.

But I think the things that have been demonstrated in multiple studies that have the most impact include exercise, eating a good diet. We're certainly going to have to unpack that to determine what that means.

So a social engagement, minimizing alcohol consumption, never smoking. And, you know, there are others along the way that that can be talked about. Certainly sleep is important as well.

But I think that those are the big ones. And I think the physical engagement in life and the social engagement in life and the engagement of cognitive challenges are very, very important and underrated.

You know, people want to take the next greatest supplement or, you know, go to a more Mediterranean diet and take various supplements because that's sort of an easier way.

But it turns out that we've known since probably 18 years ago that physical exercise is not only associated with reduced risk of developing cognitive decline, but also has in and in interventional trials demonstrable effects upon the brain as well as cognitive function.

I mean, these studies from the University of Pittsburgh demonstrate in a one year trial, for example, of people either given a stretching program or a physical exercise program that those who are engaged actually in challenging themselves physically, muscle resistance, exercise and aerobics actually demonstrate and increase in size of the brain's memory center, the hippocampus, and an improvement of memory function.

That is unheard of, you know, especially in the context of the new drugs, like looking at a map that is being touted as the, you know, the wonder drug for Alzheimer's.

It doesn't improve anybody. What it is purports it to do is simply and minimally slow their rate of decline. They're still going to arrive at the destination.

Who's going to get there a little bit later? You know, the is it worth it? What's the risk benefit? Well, you know, there's the development in a significant number of people taking the latest and greatest Alzheimer's drug of something called area and amyloid related imaging abnormalities.

These are basically areas of the brain that have small hemorrhages and swelling, and it's not an insignificant number of people who get these. So when you look at the risk benefit ratio, it's you know, for me it's a bit challenging.

Number one. And I also, as we're talking, I'm thinking it through, they're calling it amyloid related imaging abnormalities, as if the blame is on the amyloid.

We didn't observe these until we started using the drug. So it's not the amyloid here that suddenly caused these to appear. It's the drug. So they should be drug related or, you know, whatever the drug is that they're using related imaging anonymized.

But we'll leave that, as it were. So physical exercise, maybe I'm going to put that at the top of the list. Why? Because it's directly targeting the brain and it's directly targeting metabolism.

So it's improving a really fundamental issue here, which is insulin resistance. You know, to get back to the January 20, 20 editorial that I talked about from the journal The American Medical Association, where the spotlight is really on glucose metabolism in the Alzheimer's brain, people have heard the term type three diabetes, which I kind of rejected because, you know, it's not exactly a diabetes.

But now that we unpack it a little bit, it really is. Because what we're seeing is that the brain is losing its ability to utilize glucose as a fundamental flaw way upstream of the accumulation of beta amyloid, leading to things like

increased free, radical mediated stress, increased inflammation.

And the consequence of that inflammation then is the production of the markers, the beta amyloid. So we're way upstream as we look at metabolism, beta amyloid is is way downstream.

It's you know, things are already happening. By the time we begin accumulating beta amyloid again. That's my pushback as it relates to drugs targeting the beta amyloid.

You're you're the house is on fire and the fireman is they're putting it out and you're targeting the fireman because it's there. Why did the house get on fire in the first place?

That's where what we need to emphasize. So physical exercise improves insulin sensitivity.

Lifestyle factors that protect the brain

We know that things go on in the muscles that are helpful for how insulin functions in the body and therefore helps with respect to brain metabolism. The muscles, surprisingly, are now looked upon as being an endocrine gland.

What does that mean? That that they secrete chemicals that have distant effects? We know other endocrine grounds. The thyroid secretes thyroid hormone that is sensed throughout the body.

The pancreas secretes pancreatic enzymes, but also insulin. That is, as we've talked about, something that's used throughout the body. So we call these endocrine glands.

The muscles secrete ketones and lactate and brain derived neurotrophic factor Iressa and interleukin six various meio kinds. And we've talked about cytokines and other types of chemicals.

These are my own mile coming from muscle kinds and they affect the brain directly. BD And RF made from muscle actually targets brain cells to protect them, leads the brain to grow new brain cells, leads the brain cells to connect each other, and a process we call synaptic genesis, connecting more neurons to each other.

That's what suffers in Alzheimer's disease. So we want BD and EF levels to be up there. Perfect correlations between levels of BD, enough lower levels relating to increased rates of brain shrinkage.

Who wants that interleukin six? Until now we said, well, that's an inflammatory cytokine maybe McCain. But it turns out that interleukin six is really an important signaling molecule that may relate to, again, some of the ways that muscle cell and muscle activity and ends up benefiting the brain.

So, you know, we we know that exercise is a good choice. We know that those who exercise preserved brain function are resistant to Alzheimer's. Now, we've been able to connect the dots and more fully understand how and why that is happening.

Therefore, you know, the combination of aerobics and resistance training, I think is really important. And I will go on record as saying, because it's always a debate between, is it aerobic or is it resistance?

Should I spend time on the treadmill or should I be lifting weights? Well, obviously the answer that you're hearing is all three. Well, I only mentioned two, and the third is flexibility.

And why is that important in and of itself? It's important, sure. But I just want our viewers to embrace the notion that if you're more flexible, you're less likely to get injured.

And if you get injured, your exercise program comes to a screeching halt. And that's bad for you. You don't want that to happen. So therefore, spend some time before you jump on the elliptical or whatever you're going to do or go for a walk, make sure you stretch out in many ways, stretch your back, stretch your extremities, stretch your hips and shoulders.

All very important because when you do misstep or, you know, you're playing pickleball or something happens, you're much less likely to get injured. And we don't want you to get injured.

Injured exercise stops bad for the brain. Now let's move on to diet for just a moment. Before we do, I want to just assure you, you know, that I have the privilege of working directly with patients and the residents of Miramar.

And so we really get the practical application of this. And I, I you mentioned social engagement and physical engagement and cognitive engagement all being really important.

And I think some people start to feel overwhelmed really quickly. And what we've seen is that you can combine all three of these at the same time. So finding that walking buddy or that group you want to play pickleball with, picking up a new sport or developing a new skill.

We call those dual task exercises, and these can be almost exponentially more beneficial for your brain when you're engaging both cognitively and physically at the same time.

And when you add that social aspect, you get even more benefit. So things like ballroom dancing or other sort of line dancing, other things that you can do as a group where there's memory involved and physical activity involved is a really great way to make it a little bit more practical because you're doing all of it at once.

And that's a really good point because then it doesn't become a task. It becomes something that you look forward to. And like you say, you are, you know, checking a lot of boxes by going on with a group and playing pickleball.

You're getting your social connection. You're thinking about the game, you're expending calories, you're taxing your muscles, you're improving your balance.

You've done the flexibility on the front end. So you're exactly right. But then you don't want to spoil it when you get home and eat the wrong foods. Just because you've done such great stuff this morning doesn't mean you can have a crappy lunch.

You know, it's been said you can't exercise away a crappy diet. And I really believe that because, you know, I it's true. I see the same people making little progress in terms of their body morphology, really working out at the gym.

And if you know, in my mind, if they were doing that degree of exercise and eating well, then they would be seeing the change. So there's this notion that, well, I spent an hour calories in calories out.

If I burn 300 calories exercising in an hour, I should be able to bump up my intake by three in a college and get away with it. It doesn't work that way.

That's not what our understanding of food tells us. It's not calories in versus calories out. The body senses and responds times in ways to fat calories, for example, far differently than it responds to carbs, refined carbohydrates, calories and protein, for that matter.

So I think getting back to your statement, your point is very well taken. Okay. So diet, let's unpack this because there's a lot of confusion and I'm excited that in the summit we're going to we're going to expose some controversial views and some conflicting views, because my personal opinion is that there's not one right diet for everyone and there's not even one right diet for a person for the seasons of all of their life.

Right. When I think about ancestral diets, the consistent thing about them is inconsistency. And so often changing our diet is going to be even more important than picking the right one for the rest of our lives.

I'm really curious where you have landed on that subject of late, and I'd also like you to connect it to your books Brain Maker, Green Brain and Drop Acid, because I know that diet had a lot to do with optimizing some of the things that you discuss thoroughly in those books.

It's fundamental.

Exercise, muscle signaling, and brain health

And to be fair, my views on what makes for optimal nutrition have changed over the years and hopefully will continue to change because it's very dynamic.

You pointed out that it's fairly patient specific and even within that patient it will change over time. It will change during the course of the year.

There is some degree of seasonality to it, that's for sure. So the question is then how do you know, what are your goals that what are the metrics that you might go by in terms of looking at your diet?

And I think aside from nutrient content, which I think is very, very important, you know, as it relates to why we're here today, the brain, I think, what is your dietary choice as you're doing for your metabolism and how do you measure that?

Well, I think the best thing that people can do day to day is to know how are my dietary choices affecting my blood sugar? Fundamental question, again, back to Alzheimer's research.

The spotlight is now on glucose metabolism. How is my diet affecting my blood sugar? Is it spiking my blood sugar and ultimately going to lead to insulin resistance or my blood sugar staying pretty low?

And therefore, I'm I'm doing a good job. I'm from time to time drifting into ketosis, burning some fat, using these ketones as fat as signaling molecules.

Good for my brain, good to help my mitochondria. Yeah. All the kinds of downstream things that I'm sure others on on this event will will talk about. But so I think we do have to have some metrics, not just because I happened to read Good House Housekeeping this week and this is what people are recommending.

So I'm a big fan of knowing my blood sugar and not just by going and having a blood test done once a year, but much more intensely by using a continuous glucose monitor that tells me in real time immediately what is the effect of this or that food on my blood sugar.

And so, you know, I'd like to make this really simple, but it's a complex question what should we eat? And we have to have some way of knowing in the short term so we can make changes how our foods are impacting us.

Because if you wait for changes in your weight or you wait for your annual blood work or you are measuring your cognitive function, for example, you're not going to know that you might have a problem with cashews or whatever it might be, because that you thought eating a lot of that was a good thing.

Turns out for you as an individual it wasn't. So I'm all in as it relates to knowing how foods affect your blood sugar moment to moment. And that is the beauty of continuous glucose monitoring.

And frankly, there are other things that we can be looking at that give us a sense as to whether we are in general making good food choices or not. Waist to hip ratio, less so body mass index really not a great metric as it turns out.

A certainly blood uric acid level exceedingly important as well. So there doesn't need to be a blood pressure to a large extent. There doesn't really need to be a huge amount of biohacking here.

But these days, what I am suggesting, I think as a bare minimum are really having huge traction and can really be highly informative and actionable in terms of then making changes to improve your metabolism and pave the way for an improved brain destiny.

You know, Dr. Perlmutter, I've really valued what I've learned from you about uric acid, and it's such a practical measurement because anybody can get it from any doctor.

And there's also devices. Check this at home. You know, more than anyone else I know about this. So let's dove into it for a minute. What number? First of all, what is uric acid?

What number is our target and how do we get there. Uric acid in all of our training, I'm sure you remember the day or the days we learned about uric acid in our training as being the cause of gout.

Well, it's elevated. Uric acid does is associated with gout, that's for sure. Or and or kidney stones. So we really learned a high uric acid gout or kidney stones.

And here's the drug to treat it, whether it's allopurinol or any other drug that's out there. That's the drug that we would use to lower the risk acid.

Problem solved, move on to the next patient or problem. But it turns out that uric acid is intimately involved in regulating our metabolism. It's a powerful signaling molecule that our bodies make in only three pathways.

A first, when we break down what are called purines in periods or what happens in our body when we break down DNA and RNA found in the nucleus of meats or vegetables that we eat, you know, there's DNA and RNA in the cell nucleus or even in our own body.

Tissues are broken down, liberates this nuclear material, forms purines. And when those periods are metabolized, we make uric acid. And interestingly, when you go on, many of the big time clinics, Web sites, even to this day, to get a diet for gout or a diet to lower the uric acid, they're really focused on lowering period.

Avoid organ meats, avoid beer, avoid small fish, etc., because they're high in purines. And it's interesting because it really avoids what is by far and away the biggest input into uric acid, and that is fructose sugar.

That's the thing that is leading to ever increasing levels of uric acid that have really dramatically increased, almost doubling in the last 200 years.

You know, that's not a genetic change. It's a change in something environmental that's triggering uric acid levels to go up. So fructose sugar is what is put in most of our packaged foods in one form or another in the common form that we're all familiar with, something called high fructose that doesn't sound good.

Corn sirup, very sweet and very, very cheap and government subsidized. So it's everywhere. So fructose is tells our body something very simple. It says to us, winter is coming, food scarcity is coming.

And it says to our bodies, our physiology begin to make fat, begin to store fat, slow down your metabolism so you don't burn your energy stores, increase your body's glucose production, raise the blood pressure.

These are great. Become insulin resistant.

Diet, blood sugar, and continuous glucose monitoring

And these are all terrific, wonderful things that can go on in your body if you're facing starvation or you're going to hibernate. I mean, that's what goes on in a bear prior to his or her hibernation.

And how do they trigger it? They eat berries all day long. They get lots and lots of fructose, tells their body is coming. We're going to hibernate, make and store fat, raise our blood sugar and ratchet down our metabolism rate.

If a person is getting hibernate for six months, go for it. Have a hot high uric acid fructose when it's consumed at high levels becomes uric acid and uric acid.

Is that signal. Prepare for winter, uric acid levels go up. We've seen elevated uric acid levels correlate with every part of the metabolic syndrome, including an increase by fat increased waisted ratio, increased blood pressure, increased blood sugar.

All of these things are triggered as survival mechanisms by this uric acid that we thought only had to do with gout. We see dramatic increased risk of cardiovascular disease of all cause mortality being increased by about 18%.

In individuals who have a high uric acid level, we see significant increased risk of Alzheimer's disease. One study over 12 years increased risk was about 55% in people with the highest level of uric acid.

Increased risk of vascular or other forms of dementia was increased by about 155% in that study. So there are downstream consequences of constantly telling your body that we're going to starve.

So I want to if I'm listening and I have gout, I'm kind of panicking right now. Well, I don't panic. But if you have gout and your uric acid is increased, you must be aggressive and get that uric acid level down.

Likely if a person has gout, he or she is taking four boxes to add or allopurinol or a uric acid lowering drug, but having said that, we can dramatically lower uric acid with other means, including various types of nutritional supplements that work on the exam, that same pharmaceutical pathway or biochemical pathway that the drugs work by targeting the exact enzyme that is targeted by the pharmaceutical industry.

It's called sampling oxidase allopurinol. The gout drug inhibits that enzyme and therefore less uric acid quercetin does the exact same thing. Who knew?

Lou Diamond does exactly the same thing with one study at least demonstrating comparable effects to allopurinol. So on the front end, go ahead. Help us square the circle because you talked about fructose being a really big deal for people suffering with uric acid.

And yet the first thing I think of is tart cherry juice, which is a fruit. So how does that help or is it going to be hurting? Well, what did you what did you what are you that you're talking about right now?

It's what kind of cherry juice? Tart. Cherry juice for a reduction. Did you say tart. Yes. That's mean. Not sweet. Right. So, you know, if you can get changes and you could drink it all day.

Oh, that's delicious. But tart cherry juice is different. It doesn't have the sugar, but it does have the the components of the cherry juice that also help to lower uric acid.

But I think job one is ask yourself, why am I having an elevated uric acid? And, you know, I watched this podcast, you and I are doing this podcast or this summit and you have to ask, what are the inputs?

Why is my uric acid elevated? Is it my hearing consumption and my eating a lot of organ meats like liver? Well, maybe. But maybe it's the fact that I'm having two or three glasses of orange juice or apple juice each day or a couple of cans of soda, whatever it may be.

What are my inputs that relate to fructose that are bumping up my production of uric acid in the first place? That's job one. So, you know, my suggestion is in working with an individual's health care professional, that's the recommendation not to start the medication, stop the medication because they happen to see our interview, but rather begin to look at those inputs that we talked about in drop acid, like the fructose, the alcohol, the beer, and to a lesser extent, yes, the Hyperion foods reduce those or remove them.

And now watch the uric acid start to normalize to the extent that maybe in consultation with the health care provider, you can come off the drug or cut it in half or who knows what.

That's the goal. But the understanding key here is that uric acid disrupts metabolism. It's far more important than the gout of that individual. That individual with higher acid has a dramatic increased risk for weight gain and

diabetes and hypertension, all the components of the metabolic syndrome, because that's the new role of uric acid.

You know, the idea that it can do more than cause gout, that's brand new. We only saw the first inklings of literature appear about this topic in the year 1898 when Alexander Haig a different Alexander Haig.

Doctor, I wrote a book talking about elevation of uric acid being responsible for cognitive issues, for his own headache situation of various disorders that had nothing to do with gout.

So we've known about it an awful long time, but it's really now that so much literature is being promulgated that looks at uric acid as a powerful metabolic signal chemical and needs to be measured right along with your blood pressure and your blood sugar and your waist hip ratio.

All the things that people are familiar with that relate back to metabolism.

Uric acid, fructose, and metabolic risk

I love it so that so tangible and so practical I think for people to take today and use at home to improve their brain health. Another piece that I want to make sure we discuss is just this connection between mental health and cognitive health and you and your son, Dr.

Austin Perlmutter, wrote a book called Brainwash. And you guys really dove into some healthy habits that can help us not only reduce the progression of cognitive decline, but also maybe even improve it through mindset and other tools.

But for you to describe some of those pieces, that could be additional tangible takeaways for our listeners today. Sure. I think that, you know, as I think back about that book first, one of the best experiences of my life to work head to head with our son and just watch how his mind works and in the degree how circumspect he is and certainly was at the time of writing this book and where he took the conversation, you know, who gets to do that?

So I'm very, very I feel blessed and grateful that that I had that opportunity. I think the main thing that we wanted to reveal, actually a couple of things.

First was the notion that the mechanisms that underlie decline in cognitive function are also extremely operative as relates to mood disorders, meaning the underlying issues related to inflammation, oxidative stress, mitochondrial dysfunction that we see in cognitive decline are also very much now we know are involved in the various mood disorders, especially major depressive disorder.

And that was interesting to discover, but I think it was also very empowering because it allows us, all of us then to leverage what we know about improving cognitive function, to have some overlap then with how we might treat mood disorders.

So I think it's it's it turn out to be a kind of a discovery that we made during the writing of this book. And we've certainly asked more than I he's one of the writers for Psychology Today, really amplified that that whole area of exploration.

The other thing that we came to understand and think is really very, very fundamental and really should have some traction our time together today. And that is the whole understanding of how do we make a decision and we as health care practitioners tend to focus more on the decisions that people make.

Eat the right thing, eat the wrong thing, exercise, don't exercise, stay up too late or go to sleep or whatever. Those those are the decisions that people make.

And we talk about, well, you should have gone to sleep earlier or maybe need to, you know, control your blood or whatever it may be. It's always to me, I think, good advice.

But I think first first we have to consider that people may not be able, structurally and functionally as relates their brain, able to make better decisions.

And, you know, it's easy to point fingers say you've got to do this next patient. But I think it's really a very valuable I think it's something we identified in Brain Wash that we really should start to examine the mechanisms and the biochemistry of decision making and help people prepare their brains such that they can make better decisions.

That's really fundamental. And we explored simplistic early, I think the decision making areas of the brain. We refined that to a dichotomy between one area which makes generally not great decisions.

It's impulsive. It doesn't think about how the decision is going to affect me, certainly not how my decision will affect the other person, and absolutely not how the decisions are going to affect the planet or people around me.

And that is an area the brain called the amygdala. And as I just characterized, amygdala based decision making and behavior. It kind of sounds like a five year old.

I want it now. I want to stay up late. I want my candy and you're awful and I hate you. And that's the way it is. That's the amygdala screaming. But we have another part of the brain called the prefrontal cortex, and that's the adult in the room that as we mature brains in comes into the room.

The adult comes in and calms down the five year old amygdala and says, okay, I understand that you want to stay up late tonight, but remember that last night you late related you were cranky all day or I know you want to eat that, but boy, that you know, you're borderline diabetic now maybe that's not the best choice.

So It's the measured part of the brain, the prefrontal cortex that looks at the data, it looks at information, multiple inputs and comes up with arguably a better decision.

How was the decision not only in effect, me, the decision maker, but even more and more importantly, how does my decision affect you, that other person, other people around me?

How does it affect my environment, my community, my my planet? That's a much more encompassing decision making process that involves the gift that we have.

We're one third of the cortex of our brain is this prefrontal cortex. And and and, you know, it's a sophisticated shaded functionality. Well, here's where the story gets very interesting.

We expect that as we mature, that we make better decisions.

Mental health, decision-making, and the prefrontal cortex

It's the reason that six year olds, one of the reasons don't get driver's licenses and can't vote because they make more decisions based upon what they want right now, come what may, we expect that as you reach 18 or 21, whatever, that the adult has entered the room and you're finally able to look at information and make more appropriate decisions.

And that does happen. But it requires what we call top down control. It requires that the adult is able to communicate with the amygdala and say, hey, take a deep breath.

Let's figure out what is the best plan of action here. They're connected. There are various pathways by which this communication happens. One of them is called the anterior cingulate.

And here's what's really incredibly important. We depend upon that connection to keep the adults in the room, to make better decisions, to make decisions as to what we eat, how often we exercise.

Getting back to what you and I talked about earlier, you've given your viewers great information, but how many are

going to do it? You've got to work on the decision apparatus.

We depend upon the input from that prefrontal cortex, the adults in the room to rein in the amygdala, and so that the good decisions will prevail. That connection is vital and that connection is threatened by inflammation.

Now, what causes inflammation in our modern world? One of the biggest things are our dietary choices. When we eat the standard American diet. Now, the so-called Western diet, truthfully, now a global type of diet that's much higher in refined carbohydrates, ultra processed foods.

We're getting away from good fats and good vegetables and foods that tend to tamp down inflammation. We are on a very pro inflammatory diet globally, and as such, we're keeping the adult out of the room in terms of decision making.

Look what's going on around the world right now in terms of how people are behaving and the decisions that are made. These are decisions based upon I want this, I want it now.

Damn the rest of you. There's a severing of that connection with the higher order brain that we're all gifted that says, take a deep breath. How will this decision affect me?

How will it affect my neighbor? How will that affect everything around me? And what are the long term consequences? No, I'm going to eat all this crap now.

I'm going to park myself in front of TV. I'm not going to exercise long term consequence. Next thing you know, I'm diabetic. I'm beginning to decline cognitively and I'm at dramatic increased for the reason you and I are here today.

I met dramatic increased risk for Alzheimer's disease. So in summary, while you and I have unpacked the lifestyle choices all well and good, but who's going to implement those lifestyle choices?

More importantly, how are they going to implement those lifestyle choices which are very important? Do they have even the tools to embrace the notion of better exercise or a better diet, of more social engagement, of doing, as you describe, getting out of doors with other people and doing those things.

They're not going to embrace them if they don't have the mental apparatus in place that allows them to recognize these are good choices for me, for my neighbor, and for everyone I love.

Thank you so much for bringing that home. It's so important that people have the tools that they need to not just the information, but the ability to execute on this.

And what I would encourage everyone is just start somewhere. Oftentimes we can get on a virtuous cycle. So if we get a little bit more sleep now, we have a little bit more energy and we get that connection back between the amygdala and the prefrontal cortex, and we're able to make some better decisions.

And that might not last the whole day. But if we just start the day with exercise and rest and a good meal, then that can set us up to be able to make even better decisions next week and the next week and the next month and the next year.

And so just getting started is what I would highly encourage you to do. And also that community piece that we emphasize today in this conversation. Let's find a buddy, find someone that you can do this with, who can hold you accountable, cheer you on, who can celebrate with along the way.

Because this is not about the decisions you make just today. But as you describe, Dr. Perlmutter, the decisions you make for decades that accumulate in a way that either lead to really great optimal health or to that disability, whether it manifests as cancer, diabetes or heart disease or gout, that we really want to set everyone up for this optimal health so they can be contributing, as you mentioned, more widely globally, not not just in their little cocoon at home.

So, Dr. Perlmutter, this has been such a rich conversation shame that I feel so, so lucky to be able to share with our audience. Thank you for joining us.

And please tell everyone how they can find your books, your podcast. And you mentioned a new book. I'm curious to hear what that one's about. Very new, as in the proposal was finished last night.

But first, Dr. Sanderson, thank thank you for having me on your on this time together. It's been in every every interview of course makes you think about things.

And I think we went to some really deep areas that are really important. And I appreciate I appreciate the conversation, which was great. So my website is Doctor Perlmutter Adcom D-R Perlmutter Adcom that's a good place to start.

My most recent book that deals with this whole role of uric acid is called Drop Acid. Kind of a catchy title. We'll leave it at that. But it's about dropping your uric acid to have improved metabolic health.

Closing thoughts and where to find Dr. Perlmutter

And I have not entitled my new book as yet, but is it's really going back to doctor promoters roots and that is what are we telling people to do? How can we just give people the most information, the best information so they can change.

They can be an architect of their brains destiny, because we have the tools, each of us has the tools to be able to do that in the face of the notion that we should live our lives however we choose, and it'll be a magic drug for us.

That's not where we are right now. I wish we were again. As I said earlier, I would embrace that in a heartbeat. We're not there and it's many years to come.

So again, we've got to keep people from falling into the river, as Desmond Tutu reminded us. So thanks again for having me today. This is great. That's a privilege.

Thank you.