

CARBS: Toxic or Necessary? A Top 10 Episode with Dr. David Perlmutter

Intro:

Bulletproof Radio, a state of high performance.

Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. I'm really pleased to have a dear friend, just a fantastic human being, a guy with a crazy amount of education and experience across different fields of medicine, a famous author and someone who I featured in Game Changers, on the show again. I'm talking about none other than Dr. David Perlmutter, author of Grain Brain.

I think you're also the author of four other New York Times Best Sellers, and a practicing neurologist and... Well, just an overall fantastic guy. David, welcome to the show, man. That's the best I could do for you, but it still wasn't adequate.

Dr. David Perlmutter:

My gosh. It's an honor.

Dave Asprey:

Your book, Grain Brain, really helped people see that it's not just a bunch of cavemen or hippies saying don't eat grain... And I have no problem with cavemen or hippies or caveman hippies, for that matter. But if you want to get people who aren't doing lots of research to make a change, well here, I'm a highly-credentialed neurologist and here's the hard science and it's accessible. So Grain Brain really helped to change the conversation to make it normal to go to a restaurant and say, don't put gluten in that and they actually know what gluten is. But you just rewrote the entire book five years after it came out.

Dr. David Perlmutter:

We really did. There was so much enthusiasm in the project I think that was engendered because of the degree and level of science that has come in the past five years that has been so supportive and validating of our original, very much disruptive, contention. So we were talking about gluten and sugar and carbohydrates as being toxins with reference to the brain at a time... This was long ago, this is ancient history five years ago when there was plenty of pushback. Though the science at that time was burgeoning. The original book was written based mostly... I'd say significantly what brought it about at least was clinical experience in dealing with patients then finding the supportive science. But as you well know in the past five years, the science surrounding lower carbohydrate, dare I say even to the extent of ketogenesis, as well as the more recent science on gluten and non-celiac gluten sensitivity, we'll talk about that, has really been so extensive, so validating.

I think the one experiment, the one research project, I think that really I leveraged the most in terms of validating these recommendations is a study that's been going on for 2 million years. It is called the human being. And it's demonstrated that you bet a diet lower in carbs, higher in healthful fat, a diet that gives us lots of good nutrient fiber has kept us going for 2 million years. And suddenly what did we learn in the past few days? We learned that for the first time, at least in recent history, that life expectancy for men and women in the United States has not only plateaued, but has now begun to decline. We haven't changed genetically. We certainly have changed the epigenetic signaling that we are now engaged with.

Dave Asprey:

It's interesting that you talk about carbohydrates because in Game Changers where I summarize all this knowledge, one of the 46 laws of high performance is feed the little bastards in your gut. And I wrote the law it says "the bacteria in your gut control a lot more than you might imagine. They have the power to make you fat, tired, and slow to give you extra energy to tap into your power, or even to make you depressed. They're in the driver's seat. And if you treat them poorly, your performance will suffer. When you treat them well, they serve you. Learn how to make them do your bidding." But they eat at least primarily carbohydrates in the form of fiber?

Dr. David Perlmutter:

Correct.

Dave Asprey:

Because fiber is a carb. Is there some carbohydrate confusion?

Dr. David Perlmutter:

Well, without a doubt.

Dave Asprey:

Walk me through that.

Dr. David Perlmutter:

And indeed it is carbohydrate confusion. Because we desperately, desperately need carbs. We are desperately in need of fiber in the diet, which is by definition a complex carbohydrate that we don't metabolize but is yet metabolized by our gut bacteria. When we throw that baby out with the bath water, we set the stage for not nurturing these hundred billion organisms that live within us, that really depend on your food choices... A hundred trillion, depend on your food choices to nurture them to allow you to not just be healthy but be healthier; to be able to combat risk of illness moving forward. And in other words, a preventive programs. So minus these simple carbohydrates and minus sugar alcohols, for example.

So we want to understand that we do need fiber. We want people to eat a lot of good fat, a lot of good fiber, not a lot of protein. So by and large, though, I would indicate that the more plant-based is your diet, the better off you will be. If you choose to have a garnish of red meat, then it should fulfill the criteria I just proposed, wild fish as well, some free-range chicken. There are multiple levels upon which we can discuss these dietary nuances directly in terms of the macronutrients and micronutrients. But the second order, which really I think should probably be the first order, would be how these things are viewed through the lens of the gut organisms.

Dave Asprey:

If you're listening to this and you're saying, well, I'm 20 and I'm inflamed right now, and 24 years later I'm going to have a high risk of all this stuff. It appears we can either fully or almost fully mitigate the problems of having inflammation when you're young, as long as you undo the inflammation. Because that's been my own experience. My hippocampal volume is in the 86th-87th percentile for people my age, so my brain didn't shrink even though I was 300 pounds and screwed up and ate all the wrong stuff and had inflammation everywhere you can probably have inflammation. And I keep it under control

really dramatically and my brain works better now than it did in my twenties. But do you think I'm still going to pay the cost of, we'll say those years of hard living for the first quarter century of my life?

Dr. David Perlmutter:

Well, I think that there is a debt and I think that you've probably paid the debt back and then some. So I think you've put money back in the bank based upon the things that I know you're doing now. So I think you've undone the damage and you're ahead of the game. You've demonstrated that through your voxel imagery of your hippocampus, as you just mentioned. But those people who do not do the work have great risk and I'll give you another... There you go. So I hope you feel better.

Dave Asprey:

Well also I want people listening to it. You can start, you can change it. And I was the worst example I think of what you could get because of the pre-diabetes, the high risk of stroke and heart attack, the high inflammation markers across a whole bunch of different things. Pretty much everything bad on the list of aging. Other than maybe cancer. I didn't have Alzheimer's but had cognitive dysfunction. But just a really, really not... And autoimmune stuff. So if I can get to where I am, you probably weren't as far down in the hole as I was, so it should take you less work than it did me. But if you do the work, you can get yourself to where you're actually younger than you were before, which is kind of cool.

Just about all of the fatty plaque in people who have heart disease and they found that it doesn't come from egg yolks, it doesn't come from butter, it doesn't come from beef fat. It doesn't even come from bacon. It comes from microbes in your gut. The evidence is in... Gut bacteria are what's causing heart disease, because if you eat meat and you have the wrong gut bacteria, they make that TMAO stuff we talked about earlier. And even if you don't have that TMAO stuff, even if you eat vegetables, if you have plaque in your arteries it was made by our gut bacteria. Do you believe that's the case? I believe the study, it looked well done. There's there's no way to argue with the isotopes they're looking at it in this stuff, but what's your take on that? How, how real is it?

Dr. David Perlmutter:

You know, it's not the end all costs, but I think that, again, it really speaks to this notion that the health vitality, our and diversity, perhaps the most operative word here, of our gut bacteria is massively important in determining our health destiny. Lowering inflammation in your body and lowering your blood sugar to reduce glycation of proteins is so very important. One graph that I included in Grain Brain, and now with the new release of the revised edition I included it because it's so compelling, is the relationship of A1C to brain shrinkage. Higher A1C, higher rate of brain shrinkage. It's linear. You've got to know that. And having an A1C of six, when your doctor says, oh, you're not diabetic. Everything's cool, go home. Keep doing what you're doing. That does not jive with the science that's telling us that a hemoglobin A1C of 8.6 is good for you. That's BS. You need your A1C down to 5.2, and that's pretty much take that one to the bank.

Dave Asprey:

How low would you go if you could set it as low as you want it? I don't want to be average, I want to live 180.

Dr. David Perlmutter:

I don't know the answer to that. But I will tell you that one thing I've learned over the years is that there is this notion of what we call the U-shaped curve, or perhaps the sweet spot, where too low or... The

Goldilocks area, right? Where the porridge was too cold, the porridge was too hot, and this one's just right. So we know that higher A1Cs, for example, are correlated to cognitive decline. But we've been talking for years about keeping not just your blood sugar low, but actually your insulin level low.

Dave Asprey:

Even some of these studies that you talk about in Grain Brain over the last five years, we're starting to understand enough that maybe we can get these numbers dialed in so I don't have to do the guesswork. So the biohackers listening... And certainly there's a lot of people listening who are not biohackers and don't go out and do all this stuff, they just want to feel good and perform well. And I think we're sort of failing them by not saying here's the number. And you did it right here, Dr. Perlmutter, okay you want to have a number of 5.2. You don't want it to be 6 and you probably don't want it to be 4. But that's based on very recent knowledge versus most of the other lab metrics when you get it back, what the lab tells you is garbage for the reference range, because you don't want to be normal. Normal people die.

Dr. David Perlmutter:

Yeah. Well, that's in the normal range.

Dave Asprey:

Yeah.

Dr. David Perlmutter:

And what is normal these days? Normal is by definition average. That's how they develop these lab values; you take a large number of people and then they use one standard deviation on either side of the peak, and they say that's in the normal range. And I think that's a huge disservice to people who want to be optimized. Raises this discussion of personalized medicine, where we want to know about Dave Asprey specifically; not your wife, not your neighbor. We want to know about you. What's your pedigree? What is your microbiome look like? What do your current biometrics look like? And from that, we'll develop a program that is best for you.

Now, having said that... And I gave this talk at Jeff Bland's Personal Lifestyle Medicine Institute conference I guess it was two months ago, that that's the future, that's the best we can do. And we should extrapolate from that information back to the notion of making the broad stroke recommendations. There's great value in the broad stroke recommendations in terms of the broader reach of the population that's not going to necessarily be able to participate in a very in-depth personalized medicine approach. And those broad stroke recommendations are that you've got to cut down on your simple carbohydrates, you've got to understand what is the notion of net carbohydrates... And by all means, as we talked about at the beginning of this discussion, not eliminate the fiber, by definition a complex carbohydrate, from your diet. That dietary fat, if you're careful about what that fat is in terms of its type, is fundamental to your health. Understand the discussion, Dave, that you and I had earlier with reference to meat and its quality. And beyond that, look at the things like sleep and the restorative nature of sleep and exercise, for example, as broad stroke recommendations that we really need to engage.

The main premise of Grain Brain, and now with the revision, has always been to appeal to the larger audience. Yes, we made a few specific recommendations in terms of fasting insulin, a vitamin D level, a hemoglobin A1C, fasting blood sugar, amount of exercise to get, looking at your sleep, getting a sleep study as it were as one type of study to understand who you are and what your risks are. But by and large, it's the broad strokes that I believe everyone can do. And you know, one of the

recommendations I make in the book, and again with the revision that's coming out next week, and that is you do have to buy something... I am wanting you to buy something and here's the pitch.

Here's what you got to buy. And people will say, oh, I knew that was coming. Yes. You need to out and buy a new pair of sneakers. That's it. I mean, if you have to do one thing and buy one thing, go out and get a new pair of sneakers. It's so undervalued that our sedentarity is killing us in. And people think I've just got to get the project finished. I've got to whatever it is. And by and large, our work is done by sitting in front of the computer. You and I are doing it right now. This is the only time of day that I'm going to really be doing this. And I've already had my aerobic work out for the day. I'm going to do another one in just a bit. But that said, that's a huge issue. And again, it's something that everybody can do. For me, I would say even if it's walking to the mailbox and coming back, that's a start if you didn't do that before.

Dave Asprey:

You talked about something else in the new Grain Brain, that wasn't a big focus. You talk about ketosis. And we've also talked about these Goldilocks zones and at the beginning of this you said what I think is going to be the title of the show: why you desperately need carbohydrates. Because like what? Well you do-

Dr. David Perlmutter:

Great idea. You should definitely do that. With Dr. David Perlmutter. We're going to really say why that's fantastic WTF.

Dave Asprey:

Totally. You're going to have to listen to the show and realize that you're actually correct. Like if you don't have anything... If your gut bacteria wrong... But there's definitely people... It'll cause a double-take for sure. And there's an ideal number for that stuff, and clearly you and I are not going to be in the camp of high carbs ever. But also the zero carb is maybe going too far. With ketosis, I see some of the sort of fans of "as long as it's not a carb I'll eat it" type of ketosis saying, oh, you know, my blood levels are 2, 3, 4. You know, my ketones are higher than yours. I took these non bio-identical exogenous ketones and look what happened.

I have a belief based on the studies that I've seen about a good number of ketones for people. But I want to know what you think after writing the new Grain Brain. Because you've put a lot more focused on keto. Because you're a neurologist, now five years after you wrote the first one we know way more about ketones in the brain, you know there's something going on. What's the number for people? What's the max, what's the min, what's the average? Where should we be?

Dr. David Perlmutter:

Well again, we want to try to find that Goldilocks zone. And I think it has to be contextual. I think we have to look at not just ketones... And we'll get there in just a moment, but in the context of also your fasting blood sugar. So again, we want our fasting blood sugar, as I've said before in the 70s, in the 80s. I'm lower than that, but I'm okay with it. So again, these are just general recommendations. And I'd like to see people getting their beta hydroxybutyrate as a specific ketone that is measured, which does require a fingerprint, to be at least 0.5, 0.7, 0.8 in that range.

Dave Asprey:

Hallelujah. I was going to say 0.5 to 0.8.

Dr. David Perlmutter:

There you go.

Dave Asprey:

That's all the numbers I've seen. Okay. It is not 1. It is not 3. It is not 5. You might want to spike it for something, but having it high all the time is bad. And okay, why those ranges? I know there's two studies I love, but you probably have more.

Dr. David Perlmutter:

Well, I think that's a heck of a lot of beta hydroxybutyrate floating around doing what it needs to do. And to be clear, the research demonstrates an absolute linear correlation between brain levels of beta hydroxybutyrate emulating what we find in the blood. And research would demonstrate that these levels of beta hydroxybutyrate in the brain are actually very active. And this is some of the research that Dr. Bredesen has leveraged in terms of his recommendations, which fall into the same range as you and I just quoted, allowing people actually the ability to recover from Alzheimer's disease. So I take a big push from that.

I also think that it is achievable by the common man, that it certainly may be enhanced by adding MCT oil or coconut oil to the regimen. But I think even with a fairly well-defined ketogenic diet, to get that level most of the time is a good thing. I also believe that the hormesis or the stress metabolically that is imparted by a little bit lower blood sugar from time to time and therefore a slightly higher 1-1.5 range of beta hydroxybutyrate has got to have some downstream positive effects when you stress the body that way mimicking fasting... That brings up another idea of fasting mimicking, but mimicking caloric scarcity. And I think the body goes into a really protective mode. There's no food, we've got to start changing what genes are expressing and what genes are not expressing because we don't have access to a caloric resource here.

At the same time, I would indicate that having a higher blood sugar from time to time, not higher than normal, but just letting it come up a little bit, and so cycling through this looks like based upon really fairly recent research, to be more in line with mimicking our paleolithic environment and also allowing genes to be more adept at expressing themselves. But again, I think that you bring to mind these "as long as it's not a carb, I'm going to eat it." You can absolutely have a very detrimental effect on your ability to get into ketosis and lower your blood sugar if you're eating lots and lots of meat, for example, or just protein in general. And I think that's such an important concept through the notion that high levels of amino acids, the breakdown products of protein, can be reassembled through a process in the liver called gluco (sugar) neo (new) genesis.

Making new sugar is enhanced in that scenario where you're eating you go ahead and say, if it's meat, I'm going to eat it. And basically again, Atkins Redux, apart from this mTOR consideration where you're activating a pathway that really is profoundly detrimental leading to cellular death pre-programmed death and leading to mitochondrial failure. So maybe what we're saying seems complicated, but again, I think that people should... Based on current data, and let's be clear you and I may get together five years from now and say we learned through current research that the world is flat and we're going to say we were wrong. The world wasn't round, it's flat. I guess I could be open to that. It'd be a stretch. But what we understand now, and again it's bolstered as I mentioned by 2 million years of being tested on the racetrack that a diet that doesn't have simple carbohydrates that has lots of carbs, Perlmutter is saying eat a lot of carbs, the title of this podcast, but these are carbs that are fiber

that are nurturing your gut bacteria. That isn't eating meat and eggs and cheese and milk products all day. No, that's not what we're saying. Mostly plant-based, but not entirely if that is a choice.

Dave Asprey:

And plant-based does not mean eating basically flour all the time, grains, only beans, rice, starch. Right? So almost like mostly plants, but not plant babies. I don't know exactly how to express that to people? You're talking about green vegetables when you say mostly plants. Not so much potatoes that are also plants.

Dr. David Perlmutter:

That's right. And we say basically above ground vegetables. Above ground. Because these are vegetables that, by and large... Aside from their seeds that we'll get to in a moment, by and large don't store carbohydrate in the form of starch. So having a few pieces of potato or carrot, which does grow under the ground, turnips, whatever, they're not unreasonable. But we certainly want to avoid the seeds of grass because the products derived there from are generally going to spike your blood sugar. And if it's wheat, barley, or rye, and now even oats of course, you're going to get exposed to gluten and specifically part of it called gliadin.

And we really spoke about in Grain Brain five years ago the work of a British researcher, Marius Hadjivassiliou, who I think was really the pioneer in terms of the notion that gluten can have extra intestinal effects, meaning effects outside of the digestive system. What a notion. He was even very clear that neurological conditions, issues, manifestations can occur in response to being sensitive to this protein called gluten. And that was resoundingly... Although he published in the journal Lancet I might add, but there was a resounding rejection of his concepts, which I felt were very, very valid. And since that time, as you well know, this notion of non-celiac gluten sensitivity has been absolutely supported globally by literature to the extent that even the Journal of the American Medical Association in 2017 published a very extensive review with Harvard researchers contributing to this review. In fact, Dr. Alessio Fasano was a contributor to this study. Absolutely affirming for us the notion of non-celiac gluten sensitivity and the notion that gluten sensitivity can have significant extra intestinal manifestations that may involve the brain.

So when we talked five years ago about movement disorders, about ADHD, other issues with cognition, headache for example, possibly being related to gluten sensitivity because science supported that. Yeah, there was pushback, but now my goodness now it's really becoming much more accepted. And I'm really grateful for the degree of validation.

Dave Asprey:

Dr. Perlmutter, this is why your work matters. And I just have to say, thanks. Thanks for the new Grain Brain. Thanks for your decades of work in the field. It has made a big difference, and I appreciate it. And if you loved today's show, you should check out the new Grain Brain. And if you happen to order it on Amazon at the same time you order Game Changers, there'll be stuck together for [crosstalk 00:26:27].

Dr. David Perlmutter:

There you go. Forever.

Dave Asprey:

Exactly. Thanks again for being on the show. Thanks for being such a great friend and such a big, dare I say, Game Changer.

Dr. David Perlmutter:

Well, I will tell you that I was very, very honored not only to be spoken about in terms of my work in your book, but to be supportive of the book in general. Because it's really a great resource. Because we must learn from others, and you've cultivated an incredible cadre of individuals who absolutely by definition have been game changers, and are helping move the ball down the field, challenging the status quo.

Dave Asprey:

If you liked today's episode, I already told you what to do. Go ahead and read something good. You know, the good stuff to read. Thanks for listening.

Note: This transcript is an edited version of the original podcast. To hear more, go to [Why You Desperately Need Carbs – Dr. David Perlmutter #553](#).