How to Protect Yourself from Alzheimer’s:
A Special Interview with Dr. David Perlmutter

By Dr. Joseph Mercola

JM: Dr. Joseph Mercola

DP: Dr. David Perlmutter

JM: Alzheimer’s is an impending epidemic. Could it be that some commonly eaten foods are the primary culprit? Hi, this is Dr. Mercola, helping you take control of your health. Today we are joined by Dr. David Perlmutter, who is going to help us answer that question. He is a neurologist practicing in South Florida and has really one of the top-selling health books on the market today, which is Grain Brain. We’re going to certainly talk a little bit about that. I am just delighted to have the opportunity to interview him again. Well, first of all, welcome and thank you for joining us.

DP: I’m delighted to be here. Thank you for having me.

JM: Just sort of hitting the curiosity bone, I’m wondering if you could give us a little bit of your background to give people an opportunity to understand your frame and then how you came to this conclusion that brain dysfunction begins in the food that you eat, particularly our modern-day diet, which is typically high in grains.

DP: Let’s take a step back then – the modern-day diet. I mean, think about it. If our diet would have caused Alzheimer’s to such a great degree as it is doing today, we never would have survived. Obviously, something has turned the tide, something has changed here. It’s diet 100 percent. [So, let’s] take a step back.

As mentioned, I’m a neurologist. I’m a board-certified neurologist, meaning I deal with brain disorders in adults and in children every day. A couple of decades ago (I’m kind of sorry to say), I became kind of dismayed with what I was doing. I was kind of basically treating symptoms, writing prescriptions to treat symptoms, of brain issues, but pretty much ignoring what was causing those symptoms. I distanced myself from a practice that had other neurologists. I went out on my own with the purpose of trying to bring the idea of preventive medicine to brain health. I think that’s what I made [as] my life purpose.

I became a fellow of the American College of Nutrition, which seems very strange for a neurologist. And rather than make any great discoveries, I learned that our most well-respected peer-reviewed journals or literature were replete with information telling us that, in fact, diet does matter as it relates to the brain. It matters a whole heck of a lot. What we’ve crystallized down to in essence now is that diets that are high in sugar and carbohydrates, and similarly diets that are low in fat, are devastating to the brain. When you have a diet that has carbohydrates in it, you are paving the way for Alzheimer’s disease. I want to be super clear about that. We’ll talk about the references in a little bit.

Dietary carbohydrates lead to Alzheimer’s disease. It’s a pretty profound statement, but it’s empowering nonetheless when we realize that we control our diet. We control our choices, whether to favor fat or carbohydrates. When the Mayo Clinic publishes in the Journal of Alzheimer’s Disease and tells us that
Diets rich in carbohydrates are associated with an 89 percent increased risk for dementia (whereas a diet that’s highest in fat is associated with a 44 percent reduced risk for dementia), we’ve got to pay attention to that.

That’s information that people like you and I have to get out to anyone who will listen when we recognize that, as we have this conversation right now, there is absolutely no treatment for Alzheimer’s disease. And yet, according to Dr. Deborah Barnes, publishing in the journal *Lancet Neurology*, more than half the cases of Alzheimer’s disease today – 54 percent – could have been prevented had people gotten this information.

**JM:** I’m surprised it’s that low. I would have thought it had been closer to 95 percent.

**DP:** I agree. I think it’s much, much higher. People kind of expect senior moments are okay. They’re laughable. You walk into a room, and you don’t remember why. You forget your keys. You don’t remember your wife or whatever it is. You kind of laugh these things off as if they are acceptable senior moments. Not true – these things are harbingers for trouble down the line.

The empowering part of the story is you can turn that around. You can regenerate cells in your brain’s memory center. Yes, you can grow back new brain cells; it’s a process called neurogenesis. I think you and I are going to talk about that in a little while. You can reverse that process and regain memory, amplifying your DNA to express brain growth hormone and allow you to grow back cells in your memory center. I think the first question is: what’s causing those cells to degenerate in the first place?

I think what we’ve seen over the past five years are countless citations in the brain literature indicating that diets high in carbohydrate and elevation of blood sugar is directly related to shrinkage of your brain’s memory center. And size does matter when it comes to that. You can argue other points if you like. But when your hippocampus, when your memory center, shrinks, your memory declines. That’s devastating. That is the harbinger for Alzheimer’s disease. It’s the first place you look on a brain scan. But here is why we’re having this conversation today: (1) it is preventable and (2) more importantly, it’s reversible.

**JM:** Shortly before we’ve recorded this interview, there’s been a new major study published that is a meta-analysis that reviewed I believe 600,000 patients in 30 different studies about the importance of saturated fat, that it doesn’t cause all the heart disease and damage that we thought it did. This is quite a significant contrast to almost all the experts that you hear on TV or you read about in the newspapers and media. We’ve been saying for a long time that it’s not as damaging. But I’m wondering if you could give your perspective on that because I think we share similar viewpoints.

**DP:** Oh, no question about it. I mean, I’ve been talking about the benefits of saturated fat in the human diet for a couple of decades. Really, this was a huge study – 500,000 to 600,000 individuals, 72 different studies. The conclusion was that yes, what we’ve been eating for the past two million years turns out to be what’s good for us.

**JM:** Big surprise.

**DP:** Fifty percent of the fat in human breast milk, for crying out loud, is saturated fat. Why do we give people coconut oil? It’s 90 percent saturated fat. Saturated fats cannot become oxidized. By definition, they cannot undergo free radical change – they can’t become damaged. This ridiculous vilification of saturated fat, I think, is finally being laid to rest. We have to welcome back to the table wonderful, health-giving, brain-sustaining saturated fats. These are the types of discussions that I had in my lectures and with patients face-to-face as well.

We’ve been led down the wrong road. Fat is your friend. You desperately need fat. You desperately need to have good cholesterol in your body. That war on cholesterol is a perversion of the science that was
even used to tell us we should stop eating foods with cholesterol and lower our body’s cholesterol to levels that drive it into a ditch.

We know quite well that in elderly individuals, for example, those in the highest level of blood cholesterol have about a 70 percent risk reduction for becoming demented. These are the things that are good for the heart. They’re good for the immune system. Cholesterol being the precursor of vitamin D, progesterone, estrogen, testosterone, and cortisol, you lower cholesterol, you know… This is probably one of the reasons why statin drugs are so damaging. You lower cholesterol, and you set the stage for things that are very, very worrisome.

One study that came out in the journal *Archives of Internal Medicine* indicated that women who are given statin medications, oddly enough to lower their cholesterol, have about 44 percent increased risk for becoming a type 2 diabetic. What does that do to the brain? It doubles their risk for Alzheimer’s disease. It’s really a situation of “choose your poison.” I think you have to understand – you already understand, but I’m talking to your listeners…

**JM:** Sure, colloquially.

**DP:** We’ve been eating a certain way for a long, long time. We’ve had lots of fat in our diets; we’ve never had carbohydrates. Maybe in the late summer or early fall, some fruit would ripen, and we could digest it. We would be drawn to fruit that has ripened because it’s sweet. That’s where we all have gotten our sweet tooth, because it tells us fruit is ripe and we should eat it because it’s good for us. That signaling mechanism, eating the sugar, would cause our body to make insulin, we’d lay down a layer of fat, and we’d made it through the winter. That is a mechanism that has allowed our species to survive. It’s allowed you and me to have this discussion today.

The problem is people are consuming sweets 365 days a year for the winter that never comes, and thus the epidemic of obesity, which perfectly translates to, as you mentioned earlier, the epidemic of Alzheimer’s disease. Let me say, you said, “the upcoming epidemic of Alzheimer’s,” it’s already here.

**JM:** It’s here.

[----- 10:00 -----]

**DP:** It’s five and a half million Americans. It’s a risk of 50-50, the flip of a coin, if you live to be age 85 years. I will tell you that the mission here is we’re going to change those odds. We’re going to change them dramatically by giving people the information about what they need to do today to turn the table, to change the tide here, and reduce their risk for this very crippling disease, which isn’t just so damaging for the person who’s afflicted by it but the loved ones and the family members who are affected by that as well. Personally, I’m going through that with my father right now. I really know what it’s like.

**JM:** Thanks for mentioning the current incidence of Alzheimer’s, which is about five million, as you said. The reason I mentioned the upcoming epidemic is, in my understanding, this disease is actually going to get worse, and the projections are one in three. Certainly, I don’t believe we have one in three. I’m not sure of the exact incidence right now, but I think it’s far lower than that. That’s just so devastating – to lose your mind. Of course, you not only have an experience with that clinically, where you see a lot of patients with this on a regular basis, but also personally with your father. I’m wondering if you could expand on that, this comment, and then I want to talk about the carbohydrates and the fats again.

**DP:** If you’re going to take this conversation to carbohydrates and fat, you’ve led in beautifully to the explanation as to why we’re going to see a doubling of the number of individuals with Alzheimer’s by the year 2030. It’s currently costing us 200 billion dollars a year, which is twice of what we spend on cardiovascular disease. It’s triple of what we spend on caring for patients with cancer. That said, there’s a
wonderful correlation. I say wonderful because it’s a leverage point for us. It’s a place where we can act between the rates of diabetes and the incidence of Alzheimer’s disease.

Alzheimer’s is directly related to elevation of blood sugar. A study that was published in the New England Journal of Medicine in August 8th 2013 demonstrates that even mild elevation of blood sugar, 105 or 110, these levels were already dramatically associated with the risk for becoming demented. I’m seeing those levels every single day. What’s disheartening is that patients are coming to see me with these blood levels and were told by their treating physicians, “Oh, you’re only five or 10 points above normal. Don’t worry about it.”

The problem with that is we do need to worry about it. We need to understand that according to probably the most well-respected medical journal on the planet, having a blood sugar of 105 or 110 is bad news indeed. It is not satisfactory. It’s not a pat on the back and, “Go out of the office and hope for the best.” It is time to dramatically change your diet, lower your blood sugar, and directly reduce your risk for becoming an Alzheimer’s patient. I’ll reiterate, a disease for which there is no treatment.

That said, we definitely need to redefine what we call a normal blood sugar. Normal should not be the same as average; normal should be optimal and should be ideal. That’s what we should be striving for. That’s the information that your viewers really need. That is “What should my blood sugar really be?” I would submit anything over 92 to 93 in that range is too high. Now, let me just get into one other metric because it’s really very, very important.

**JM:** Before you get on the metric, let me just clarify that, too. When you say “blood sugar,” you’re talking about fasting blood sugar.

**DP:** That’s fasting blood sugar, right.

**JM:** And then if you can just comment as to what you think is the ideal. You said it shouldn’t be above 92. What do you think the ideal is?

**DP:** I like blood sugars 85 maybe to 95 maximum. But again, I think 90 would be the tip of that bell curve. Upper 80s even is perfectly reasonable.

**JM:** But is there a lower limit that you’d like?

**DP:** Well, I think it really depends on whether that person has adapted his or her body to burning fat. We have to qualify that answer a little bit. People who have been on a high-fat, low-carb diet are able to tap into body fat as an energy resource. They’ve undergone a change called keto-adaptation. It means they’re burning fat and they can get by with much lower blood sugar because they’re burning fat and don’t need to really worry about blood sugar as much.

This notion of the brain needs the sugar or loves sugar is really old news as well. Fat, specifically ketones, which your body produces by metabolizing your fat, is now called a “brain superfuel.” There is even a pharmaceutical product, a medical food, that you can write as a prescription, which raises the level of ketones or fat in the bloodstream of patients, offered up now as a treatment for Alzheimer’s disease. Who knew? The point is the brain loves to burn fat. That’s what we have to shift it over to.

**JM:** Okay. Thank you for expanding on that. The reason I had mentioned the saturated fat issue is that we had talked about the increase in the amount of carbohydrate as being the primary responsible factor for this increase in brain disease and Alzheimer’s. Of course, there are only three nutrients that we can choose from: carbohydrates, protein, and fat. I mean, basically that’s it. If we lower the carbohydrates, we only have two options. You have to replace them with something. The options are fat or protein.
I think we’re both in agreement that the amount of protein that you should eat shouldn’t be that high, because if it’s too high, you have a problem. That only means you have one variable you can choose, which is to increase the fat. Why don’t you give us your perspective on that for a moment: what types of fat? Because it’s not just any fat. If we go have margarine or French fries, that’s not going to work. Obviously, French fries because it’s a carb, but, I don’t know, doughnuts? Why don’t you…

**DP:** But it wasn’t that too long ago – correct me if I’m wrong – when we were seeing advertisements on television to eat more margarine and less butter.

**JM:** Oh, sure.

**DP:** Because margarine was going to save your life and butter was going to put you in your grave. Nothing is further from the truth. You are correct. Most of the dietary studies that you see these days pretty much keep the protein about the same (that’s not really a variable) and compare variations of fat calories versus carbohydrate calories. All of the low-fat diets that are still popularized by the American Heart Association and the American Diabetes Association to this day, by default…

**JM:** As we speak!

**DP:** Have higher levels of carbohydrates. It absolutely is not in line with current science. I don’t know where to begin in terms of what’s going on there. I would submit that sometimes people say, “Follow the money,” whatever. You’ve got to understand that we’ve got to get rid of the carbs and welcome the fat back to the table.

Again, you made a very good point that the type of fat we choose to consume is fundamentally meaningful in terms of health. If you’re eating trans fats, hydrogenated, modified fats, or fats that have been modified in such a way to extend their longevity on the grocery store shelf, those are like coffin nails. You’ve got to avoid them. But avocado, olive oil, nuts, and seeds… If you choose to eat meat, it’s got to be grass-fed beef and wild fish. These are wonderful sources of healthful fat.

Coconut oil, your body is going to love you for it. The idea of coconut oil being a food that is going to help you with longevity and stave off disease, that research is brand-new. It was only published about 3,000 years ago in the Vedic texts. This is what we’ve always eaten. Now suddenly, we’re scientizing our recommendation that you should eat this and that, and it’s just totally off-base.

Let me make one other point if I could. You said fat, protein, and carbohydrates – the Big Three in terms of food. That said, we’ve got to understand two things: (1) the human requirement for carbohydrates is zero. We require no carbohydrates in the diet, unlike fat and protein. (2) Well beyond the sources of calories that we take in, food is information. The foods that we choose to consume are instructing our DNA in terms of its expression. This is called epigenetics. How empowering is that?

I make this point because our genome takes 50,000 to 70,000 years to make significant changes to adapt to new environments and adapt to new foods. We are instructing our genome with this perverted information by giving our genomes signals from high levels of processed foods and carbohydrates. To me, that is job one – it’s to get people to understand that you are affecting your gene expression and giving it bad information. This is a cornerstone, a player, in terms of almost every health malady that we are trying to deal with today.

**JM:** Great. I’d like to finetune the discussion on the importance of making the transition from what you mentioned earlier – from carb-burning as your primary fuel to fat-burning. It’s my impression that anyone who has insulin and leptin resistance, which I believe is about 85 percent of the population, is probably in carb-burning mode as their primary fuel. That speaks to the majority of the people in the country (maybe not the majority of people listening to this).
One of the tools that I’ve found particularly useful is intermittent fasting, which really is a phenomenally powerful jumpstart to do that. But here’s the question: assuming a person does this and they are able to resolve their insulin resistance, their fasting insulin level goes below 3; their fasting blood sugar is 80 or 75; they don’t have any heart disease, diabetes, or disturbed cholesterol ratios; and they’re obviously in their normal bodyweight. If that’s the case, I’m thinking, you know…

I’ve sort of evolved my thinking on this with respect to the fact that maybe going in full-time ketosis or really extremely low carbohydrates may not be the best approach and that it might be wiser to replicate our ancestral models, which were essentially feast or famine. Today everyone’s on a 24-hour feast and they never have any famine.

While we can address that with intermittent fasting, maybe the converse may be as equally as bad, where we have a 24-hour famine. To actually go through the cycles where you can have extra carbohydrates, you can feast, you can enjoy life, and go to parties and celebrate as long as you keep your ability to burn fat, which you can monitor by those criteria that you just mentioned…

**DP:** Good points. In *Grain Brain*, in the intervention part of the book, we begin that with a fast. What I tell my patients is that, “What we’re going to do for you is press the Reset button. We’re going to start you over, and we’re going to do it in an aggressive way. We’re going to reboot this hard drive here.”

You know, fasting does a lot of things. It allows people to make better connection with themselves and to have gratitude for the fact that we do have food, and that gratitude extends to all the things that we do have. Fasting has been a part of every major religion’s tradition as far as history tells us whether it’s the fast of Ramadan, the fast of the Yom Kippur, or Jesus fasting 40 days before his public ministry. Fasting is a great way to reconnect with whatever spiritual doctrine you ascribe to, and more importantly I believe to reconnect with yourself.

But that said, fasting does the things that you say it does. It allows us to amplify gene expression. Sirtuin gene, for example, amplification to allow us to reduce inflammation, increase antioxidant coverage, and change how we metabolize things like carbohydrates and fat more importantly. I like the feast and famine part of your discussion, where we get to feast for 24 hours. I’ve never actually done that, but that sounds like a heck a lot of fun. The point is…

**JM:** Well, not 24 hours, but you just go out of the point where you’re radically restricting your carbohydrates for long-term, indefinitely essentially.

**DP:** Yes. I will say though I’m real aggressive about it in those individuals who are insulin/leptin resistant. I think that it’s really good to hit these patients very aggressively with extremely low carbohydrates. Even Dr. Atkins a couple of decades ago, in the induction phase of the Atkins program, had exquisitely low levels of carbohydrates probably for the same reason. But once we get people to steady state, we like to, you know…

We’re comfortable at 60 to 80 grams of carbohydrates a day, which is probably maybe 20 percent of what people are typically eating in America, if not more. We do see a resumption of ultimately insulin sensitivity and leptin sensitivity. You mentioned trying to keep insulin levels below 3. Again, the so-called “normal” level of insulin is 26. Meaning 25 is still a normal range? Yikes!

**JM:** Is that fasting?

**DP:** If somebody has an insulin level of 26, they are in deep dudu. They need a lot of work. They need to fast. They need to drop the carbs. They need to add back the good fat. They need to add in some anti-
glycating agents like benfotiamine and resveratrol. We need to hit these people aggressively. This is what works. This is what reduces their risk of converting to diabetes, and therefore has a huge role to play in protecting their brains.

**JM:** Okay. You mentioned a few things. But are there any other everyday choices in your Grain Brain Rehab program that people might benefit from hearing about now?

**DP:** I don’t know where to begin. I would say that perhaps the most underrated intervention is not a food at all, but aerobic exercise. I am all over that with my patients. When I write their vitamin list, the first thing I put down is exercise because that is beyond the fact that it’s burning calories, which is probably not high on the list of why it’s important. Aerobic exercise is a powerful epigenetic player. It’s a powerful way to change your gene expression to code for things that are going to give you a longer and healthier life. Exercise reduces free radical production in the long term. It reduces inflammation.

From my perspective, why it’s so darn important is aerobic exercise has been shown to change gene expression and turn on basically brain growth hormone, which goes by the acronym or the initials BDNF, brain-derived neurotrophic factor. That said, this is basically a hormone that codes for the brain’s ability not only to repair itself but to actually grow new brain cells, the process called neurogenesis. I mean, who knew that the human brain has this unbelievable ability to grow new brain cells? Correct me if I’m wrong, but when we were in medical school, they told us that didn’t happen.

**JM:** That’s right.

**DP:** It’s new information. Where your brain regrows itself is in the memory center, of all places, by the grace of God. That is in the Grain Brain program, which is focused on low-carbohydrate and high-fat. It’s focused on avoiding gluten. But it’s also really involved in the importance of aerobic exercise.

**JM:** Do you discriminate anaerobic? Because I started aerobic exercise about 45 years ago after reading Dr. Cooper, who actually coined that term “aerobics,” and sort of abandoned it after 40 years, realizing that there are probably better ways that may be more time-efficient, such as high-intensity exercise training, where you’re really bringing your heart rate to a max. You’re essentially getting the equivalent of an hour to two hours of exercise in 20 minutes. I’m wondering if you can incorporate that in your program.

**DP:** That is specifically what we recommend. Oddly enough, the 20-minute program, about 140 minutes a week, is what was actually studied in the proceedings of the National Academy of Science and published in 2011. There were two groups. The one arm, the one group, did that. They did aerobic exercise for 20 minutes over the course of a one-year period versus a group that did stretching.

What they found was (they actually measured the size of the brain’s memory center) the group doing the aerobics grew a bigger hippocampus, a bigger memory center, compared to the group that stretched. The BDNF levels, the brain growth hormone levels, were much higher in the group doing the 20 minutes of aerobics. Finally, actual test of memory function demonstrated improvement in the group that participated in the aerobics. They improved their memory. There is not a pharmaceutical agent on the planet that can make that claim. All you got to buy is a pair of sneakers. You don’t have to buy a drug; there is no drug.

**JM:** Interesting. Are there any other aspects of the Grain Brain program you’d like to share now?

**DP:** I think that, again, the main object is to let people know that a low level of ketosis, of fat-burning, is really regarded by many now to be pretty much the natural state of humans. We’re trying to keep people in a low grade of ketosis.
Those individuals who already have existing neurologic problems like Parkinson’s, Alzheimer’s, or Lou Gehrig’s disease (ALS), we push it even further to the extent that they’re on a very aggressive ketogenic, fat-burning diet, giving them good dietary fat to burn while cutting their carbohydrates. We go so far as to have them check their urine with what are called keto sticks. You can buy them at the pharmacy. Nine-dollar bottles will last you a year. You’re able to check yourself at home by checking your own urine to determine if you are in ketosis, if you are burning fat. That is the most therapeutic program for the brain.

Now, there are certain nutritional supplements that the Grain Brain program talks about. I happen to be very fond of the spice turmeric because of its anti-inflammatory potential and its ability to also turn on BDNF, the hormone that’s involved in brain health. The literature that talks about turmeric being good for the brain, that’s really brand-new as well. That only goes back another 3,000 years to the Vedic text, where turmeric has been part of the Indian culture in curried foods for a long, long time.

The other thing I think is so fundamentally important in the Grain Brain Program is to embrace those laboratory studies that you and I have already talked about to some degree. Get a real good sense not just of your fasting blood sugar and what that happens to be today, but what has your blood sugar averaged to over the past three or four months as indicated by what is called the A1c. In addition, as you’ve mentioned, fasting insulin is a powerful way to understand where you are on the scale of insulin sensitivity or more importantly insulin resistance.

We do a test called Cyrex [Array 3], which is a measurement of gluten sensitivity — a very, very good test. I think when you have these tests under your belt, you get a great understanding in terms of where you are and more importantly what you need to change.

The other test that I think is so important is to have your vitamin D level checked. Everybody says, “How much vitamin D should I check?” I say, “I don’t know.” I do that because I love to see the look on their faces like, “What do you mean you don’t know? You wrote a book about it.” I said, “No, I have no idea about what you should take. Let’s take your blood level and see what your current dose of vitamin D is doing.”

Because some people need 5,000 units of D3 a day; some people need 10,000. I need 10,000 units a day to get my blood level to the optimal level of around 70, 80, and 90. The units are nanograms per milliliter.

JM: Yeah, they have to multiply it by 2.5.

DP: Yeah, exactly 2.48. Around the world, there are different parameters that are used. I would suggest that you target yourself to be in the high normal range of whatever the laboratory results are that you’re getting. Again, vitamin D is obviously a misnomer. It’s not a vitamin at all. “Vitamins” define a group of chemicals basically that must be in the human diet for sustaining health, without which you would experience a disease, whether it’s scurvy from vitamin C, beriberi from vitamin D deficiency, pellagra, or whatever it may be. We don’t make these things. We need them in our diet.

But the point is we do make vitamin D in our bodies, and therefore it’s strictly, by definition, not considered a vitamin. It’s a steroid hormone that we manufacture out of, who knew, cholesterol. Again, the notion of this war on cholesterol and then drops your vitamin D level down into a ditch is something we need to think about.

JM: The only modification to that recommendation would be, especially with someone like yourself who lives and practices in South Florida, would be to ditch the oral vitamin D and expose your skin. I haven’t
taken oral vitamin D for, like, four years, and my level’s still about 70 because I make it a point to get really tan all the time and spend as much time as I need to do that. Now, it’s obviously not going to be possible for most people to do that. But for those who do live in those areas, certainly in the summer, [it’s possible] to structure their schedules, so they can have that opportunity to get that sun exposure, which I think provides more benefits than oral vitamin D.

**DP:** I think we’re just beginning to understand that. There’s been, over the years, this incredible battle against sun exposure for no other reason, because we know that sun exposure will cause you to have skin cancer, terrible things will happen, and your children might be born naked. I don’t know, terrible things.

But the point is, interestingly enough, studies have shown, for example, that those people who use the most sunscreen have the highest risk for skin cancer. Who knew? We’ve got to reevaluate that. What were we like? We were naked individuals in the sun most of the day, making vitamin D and who knows what other health benefits we will derive from that – modification of melatonin production, you know. Lots of things are related to sun exposure. Your point is right and spot on.

**JM:** Okay, let’s transition a little bit back to the diet and talk about its influence on the microbiome. Just for a brief review, we’ve got about 10 trillion cells approximately in our body. Most experts believe there is about a hundred trillion bacteria. What I was recently surprised to find out is that it goes beyond that. There are bacterial phages that outnumber the bacteria by tens, so there are a quadrillion bacterial phages in our gut.

One of the powerful benefits of adopting the dietary recommendations you are advising in Grain Brain is its influence on this microbiome. I’m beginning to believe that those benefits may even be the primary reason why that approach works independent of its influence on the metabolic effects. I’m wondering if you can comment on that.

**DP:** It’s profound. This type of conversation keeps me up at night, I have to admit. It’s because we are so ignorant of this potential and about what’s really going on. We have this notion that we’re this self-contained unit that can do everything it needs to, all the enzymes that we need – we’re ready to go. We are so vitally dependent on our microbiome, which extends well beyond the gut. Bacteria are pervasive throughout the human body – in the genitalia, the mouth, the ears, and on the skin. We’re now seeing reports of viruses and at least evidence of RNA, of bacteria, residing normally in the human brain. Earlier, we had a discussion about epigenetics, about how our food choices and exercise influence the expression of our normal DNA, and how exciting that is. But when you multiply the amount of genetic material in our body by a thousandfold – that’s the number of species of bacteria that live within us – think about the epigenetic potential of every morsel of food that you eat in terms of changing the gene expression of this resident bacterial population that lives within us.

That is the population that is playing a major role in conducting immune balance, in regulating the amount of inflammation within our bodies. That regulates appetite. That regulates our neurotransmitters that make us feel happy or sad. That is dictated to a large degree by the health of our microbiome so dramatically influenced not just by our food choices but by many choices – whether we’re exposed to antibiotics with every cold, whether we’re choosing to drink chlorinated water (which kills bacteria), whether we were born by caesarian section or passed through the birth canal (where we receive our inoculation of organisms that help prime the immune system), whether we were breastfed or not, whether we receive various immunizations or not.

There is a lot of literature coming out now indicating that while we’ve talked about gluten sensitivity as leading to leakiness of the gut and how that can lead to inflammation, there is a lot of information that’s now indicating that gluten may play some of its damaging role by the changes that it imparts in the
microbiome, in the bacteria within the gut, when that food is consumed. We have a new journal (we talked about this before we went to this recording) called Brain and Gut that’s coming out next year.

**JM:** You’re too modest to say it, but you are actually the editor-in-chief of this journal.

**DP:** I am.

**JM:** That’s quite an honor because I believe there are people from Harvard who started this journal, and they invited you to be the editor.

**DP:** It’s an honor. I am not going to tell you it’s not because I’m not in academic medicine; I’m in private practice. It’s going to be I believe revolutionary when we finally embrace the notion that what’s going on in the gut is playing a pivotal role in how our brain functions moment to moment – our mood, our cognitive ability, our ability to pay attention in class as children, for example, and even our risk for Alzheimer’s disease.

I just reviewed a very interesting study that correlated the risk for becoming an Alzheimer’s sufferer in countries, and it correlated perfectly with the degree of hygiene in the country as measured by the amount of certain parasites found within the gut. Those countries that have a lot of parasites in the gut as a marker of poor hygiene had the lowest risk of Alzheimer’s. Those countries where there were no parasites in the gut or very few, countries where we have great hygiene and we’re always washing our hands and sterilizing this and that, and the risk of being an Alzheimer’s patient is dramatically increased in those countries.

Who knew? Who knew that dirt is good, that eating foods that have a little dirt on them can be good, and that delivering our children through the birth canal is so important for building their microbiome from day one. We’ve got a lot to learn. With reference to our new journal Brain and Gut, we’ve got a lot to explore moving forward.

**JM:** Yes, indeed. We had talked about your program being useful for the treatment of Alzheimer’s and by implication other forms of dementia, because Alzheimer is, of course, not the only type. But I’m wondering if it’s useful for other types of problems that neurologists typically see, which should be things like Parkinson’s, migraine, seizures, and even autoimmune diseases like multiple sclerosis (MS). I’m wondering if you could just…

[----- 40:00 -----]

**DP:** All of the above. Is there a box to check for all of the above? Absolutely. There’s not one diet that’s good for MS, one diet that’s good for dementia, and one diet that’s good for attention deficit hyperactivity disorder (ADHD). Why would that be? There is the right diet for the brain. Seizures respond beautifully to a diet that’s low in carbohydrate, high in fat. It’s called a ketogenic diet. It was really the first interventional treatment for epilepsy developed in 1928. That’s a long history. That was the first treatment for epilepsy.

As I mentioned, even mainstream medicine is now embracing the notion that fat powers the brain and has created a medical food that people can write a prescription for. We do the exact same thing for Parkinson’s. The rate at which a Parkinson’s patient will decline perfectly correlates with their blood sugar. Risk of developing Parkinson’s is dramatically increased if you’re diabetic and then, of course, there are the environmental toxins that play a significant role as well. As we talk about that, no one has particularly come to understand why it is that pesticides are related to dramatic increased risk for Parkinson’s.
Why do you think that might be? It’s because pesticides and foods that are laden with pesticides change the microbiome, increasing inflammation, increasing free radical production in the brain – that is the cornerstone of Parkinson’s, MS, and Alzheimer’s. It all is starting to circle back around to the incredible net that is thrown by these bacteria that live within us.

I think the traction point for us is what do we do with this information from day one? How do we protect that microbiome? That means thinking twice the next time you have a cold and getting your doctor to write a prescription that he or she calls in over the phone without actually even seeing you. These are important things to pay attention to these days. The overuse of antibiotics, aside from its role in creating drug-resistant organisms, is really changing that individual’s microbiome significantly and with long-lasting side effects.

As crazy as it seems, one of the modalities that we are employing in our practice to treat certain neurological problems is fecal transplantation, meaning having our patients receive fecal material given to them through an enema from a healthy individual. We’re seeing results that are breathtaking applying that technology to neurological conditions. I don’t know that you were expecting that one.

JM: No. That’s exciting. I have some personal experience with fecal transplants. My girlfriend, one of her relatives, her uncle I believe, had Clostridium difficile (C. difficile) infection. He got it because of complications from being treated for a cancer he didn’t have.

DP: Oh, my gosh.

JM: Imagine that. Anyway, he was pretty sick. I recommended fecal transplants. I wasn’t he’s attending [physician], though. Her family decided to ignore them, trusted the attending physician, and he wound up dying three days later. It is a really bad infection. These fecal transplants do work.

DP: The effectiveness in treating Clostridium difficile that you describe now is 93 percent using fecal transplant. There are research teams that are the best institutions exploring this. That is a brand-new therapy. It was only described by Nei Jing, The Yellow Emperor, in 4th century B.C. in China. Again, that’s brand-new, hot off the press.

JM: Yes, indeed. All right, now that we’ve got everyone excited about the potential of the Grain Brain program, I’m wondering if you can give us a sample day of menus that would be easy to follow and what would be a good example of what you’re trying to teach through the book.

DP: I would say that the most important player is to favor above-ground colorful vegetables – above-ground because they’re not going to be containing a lot of starch, which your body immediately breaks down to simple sugars. Welcome back things like kale, chard, collards, oh my gosh, broccoli, and spinach. These are all just wonderful foods for your body. Lots of fiber. When we tell people they’re going to give up their grains, their first question is, “What am I going to do about fiber?” That’s what we’re talking about in terms of those foods.

Now, I think that the less cooking that goes on for food, the better, especially as it relates to the microbiome. I think that if you choose to be a meat-eater, you should be choosing meats that are grass-fed and that are organically raised. There’s no alchemy that happens when cattle are given genetically modified grain, treated with antibiotics and hormones, and who knows what else. There’s no alchemy that happens to create this wonderful meat. You’ve got to be super selective.

By and large, the literature that talks about the dangers of meat as it relate to health, I think those citations are on target, because meat, by and large, is a dangerous food with the exception, in my opinion, of those grass-fed products – wild fish as opposed to farm-raised, antibiotic-treated Frankenfish, pasture-raised chicken if you choose to eat meat, and farm-raised or pasture-raised eggs as well. We look at foods in
terms of how they’re going to treat us with respect to inflammation, and we know that, for example, factory farm-raised eggs are about 14 times as high in omega-6 fatty acids, the pro-inflammatory fatty acids, as compared to natural, pasture-raised, free-range eggs.

I personally start my day with a three-egg omelet. I have kale, spinach, broccoli, or whatever vegetables we may have had the night before. I use lots and lots of olive oil. I tend to eat some goat’s cheese. I have a cup of coffee each morning. I have for lunch mostly vegetables. Generally, they’re steamed or they are raw. I oftentimes put vegetables into the blender as they are. We have a wonderful source for organic vegetables. Frequently, I don’t wash them. Who knew? Leave a little dirt on; it’s good for you.

I think dinner can be pretty much the same. If you choose to eat meat, I tend to favor having that small protein meal at the end of the day, recognizing that the focal point of the meal should not be the meat dish; it should be still the vegetables. That said, as it relates to the microbiome, I think fermented foods really have a powerful role to play in providing reinoculation of the microbiome and giving you what you need as a prebiotic to help you grow the bacteria that live within you. That’s another push for having your body digest vegetables as opposed to really cooking them.

**JM:** Terrific. One of the things we both agree on is that it’s the quality of the produce that makes a big, important difference. If you’re just getting produce grown conventionally in factory farms that’s basically grown on nutrient-deficient soil, you’re not going to get high-quality produce. Ideally, you grow it yourself. Most likely, when people hear this, it’s going to be spring or summer, at least when it’s first broadcasted. That’s an option. But even so, many people don’t have the time, effort, or energy to do that.

But one of the processes that I’ve been promoting and encouraging people to consider is something as simple as sprouting. Not in Ball jars, which I’m sure many people have done, but actually grown in little potting trays, maybe 10 by 10 inches, so that in 10 days – literally 10 days – you can harvest amazing food that’s alive, raw, and actually maybe 30 times more nutrient-dense than the vegetables that you’re growing in your garden. That is a really powerful intervention that people can use to make a big dent and to get nutrient-dense foods. I strongly encourage people to consider that in addition to your program.

**DP:** I’m thinking back when our children were growing up, I plough the front yard. I live in a kind of a nice residential area, where you don’t do that. I plough the front yard, bought in organic dirt from our organic farmer, and framed it out in 14 by 14. I built this beautiful vegetable garden. It sustained the four of us wonderfully.

People would, you know. I thought the neighbors were going to complain because we didn’t have a manicured yard. The neighbors would stop by and show their children that broccoli grows in the ground. “This is what a broccoli looks like.” It is a very, very rewarding experience to do that, to reconnect on many, many levels, not the least of which is the gratitude part that this is what we were given.

**JM:** Yes, indeed. In fact, I’ve had a similar process. I’ve been in the process of converting my ornamental landscape into edible landscape. I’ve put down about 10 tons of biochar, which is a phenomenal nutrient amendment to the soil that adds carbon back in. It tends to keep the humidity of the soil high and improves – imagine this – the microbiome of the soil.

**DP:** Absolutely. In one cubic meter of soil, there are more than a thousand different species of organisms. What’s happened in the United States in the Great Plains, where 99 percent of the topsoil has vanished, is that we’ve basically sterilized the soil. When people are saying, “We’ve got to just eat vegetables,” what they’re getting is this Frankenfood product. Yeah, you can grow a broccoli on that. You can grow wheat, corn, and all these things. But where is it going to get the micronutrients that are so valuable and so important?
The soil has to be absolutely alive. That’s not what happens in these factory farms. The soil is, you know, basically it’s Styrofoam with the three main nutrients to grow a plant.

JM: Okay, thank you for that expansion, because I think it really is one of the most important things that people can do to identify these high-quality foods so they can put it in their diet inexpensively. One of the criticisms thrown at people who recommend these organic foods and produce is that it’s so expensive. But when you do your own sprouts, rather than paying 30 dollars a pound like you might at Whole Foods, you can do a whole pound for under a dollar.

DP: No question. There’s so much you could do with that not just by eating it in and of itself, but by adding it to certain dishes as a garnish, an enhancer, and even almost cosmetically. Sprouts are super cool. Think of what we’re doing right now. Dr. Mercola and Dr. Perlmutter, we’re talking about sprouting foods and what we eat because it has a role to play in our topic: reducing your risk for Alzheimer’s disease. We’re not talking about what the dose would be of this or that medication, Doctor This and That. It’s incredible. We are talking about food as it relates to the brain. It is so timed for that to happen.

JM: One of the points that you bring up in your book is the issue with gluten. Certainly, any physician who’s been practicing natural medicine for any length of time has been aware of this well before your book. But I think you really have brought to the core, better than anyone I can remember, the importance of this issue. I’m just wondering if you could expand a little bit about that and tell people what some of the signs might be that they might be suspicious that they suffer from this. Maybe even comment on the percentage of the population that’s affected, because I think that would be an interesting comment.

DP: As far as the signs that you may be gluten-sensitive, I would say that the simplest thing to do is if you have a vowel in your name, chances are, you may well be gluten-sensitive. That kind of narrows it right down, doesn’t it? The point I’m making is gluten sensitivity can manifest itself in almost any way you can imagine – from skin disorders to joint pain, dementia, depression, insomnia, and ADHD. People always associate gluten sensitivity with the gut. Mainstream medicine would tell you that, “If your bowel movements are good, you’re not having abdominal pain, gluten sensitivity doesn’t apply to you.” That just really flies in the face of what our most well-respected gluten researchers have actually published.

I’ve had these meetings in England, for example, and met publications that show us that there is something called non-celiac gluten sensitivity, which may involve 30 to 40 percent of the population, or according to the work done at Harvard by Dr. Alessio Fasano, may in fact involve every one of us – again, everybody walking the planet. Gluten, this bizarre and very foreign protein found in wheat, barley, and rye, has some very significant effects on the cells in the gut, leading to the production of a chemical called zonulin, which enhances inflammation and tends to open up the gut, making it leaky.

But what Dr. Fasano has discovered is it also can make the blood-brain barrier leaky and let proteins into the brain, where they don’t belong. This is a very, very big deal. You and I just had a discussion on the emerging literature that’s correlating gluten consumption with changes in the bacteria, changes in the microbiome, which may very well be detrimental. We’ve been seeing lots of cool things happen with a gluten-free diet in a variety of neurological problems, even movement disorders.

I presented a case on my public television program of a young man, 23, who couldn’t control his arms and legs. They were jumping all over. He was told that he got to have Botox injections into all of his arms and legs. Well, we took a chance. We put him on a gluten-free diet, and his problem completely resolved. We had some clues that he may be gluten-sensitive because he did have attention issues as a child and he did have some gastrointestinal (GI) issues as a child. We see stuff like that every day. We see women and men with headaches resolve with gluten restriction.
I think one of the most empowering stories is the ADHD story. Here in America, we have about 6.5 million of our children diagnosed with ADHD. That in and of itself is breathtaking, but the real nauseating part of the story is that about two-thirds of them are receiving amphetamines with the acquiescence of their parents and doctors, saying, “It’s okay for you to take amphetamines because that will help you focus.” Something’s very wrong with that picture. Something’s wrong with the notion that 85 percent of the ADHD medications manufactured on this Earth are used right here in America.

JM: I couldn’t agree more.

DP: Lots of these kids are gluten-sensitive. Restrict the gluten, give them more healthful fat, cut their carbohydrates, tell them, “No, you shouldn’t start your day with a glass of orange juice. That’s nine teaspoons of sugar,” and watch what happens to these kids. Am I saying that they’ll all do great and not require medication? Of course, I’m not saying that. But I would submit that if one percent of those kids doesn’t have to go on a drug, that’s a job well done. We’ve got to incorporate this into our protocols before we reach for the prescription pad.

JM: Thank you for those comments. I’m just personally curious. You had mentioned with respect to the prevalence that if you have a vowel in your name that you might likely have gluten sensitivity. When I was practicing, I noticed that people of Irish extractions, especially if they were all Irish or even English, seemed to have a far higher rate. They had a really massive, overt, and serious signs of gluten toxicity. I’m wondering if that’s been your experience, too, or if you’ve found any additional risk.

DP: The vowel in the name was, of course, a joke. But you bring up a very good point. That is the risk for gluten sensitivity follows the human migration pattern out of Africa. The reason there’s less gluten sensitivity in the equatorial regions of Africa is it may well be that those individuals, as agriculture developed with the advent of agriculture, were selected out and died, and did not reproduce. Agriculture slowly moved north to Northern Europe and the selection process is now occurring. There’s still a little bit more gluten sensitivity in those areas compared to where agriculture had its birth, in the Fertile Crescent.

It’s interesting to take a look at that. There are certainly some genetic aspects to it as well. There’s no question that there are implications with reference to the microbiome in terms of how we respond then to the gluten challenge. But rest assured, this gluten-free fad is nothing of the sort; it is not a fad. It’s not a trend. It is based on number one: hard science. The fact that we’re spending three and a half billion dollars on gluten-free foods these days is so because people are getting fabulous results. It’s very, very real.

People post on my website. They post on my Facebook site every single day, “I went gluten-free and something went away – my joint pain, headaches, depression, and brain fog.” These things are very, very real. These individuals who are taking the time to post this information are doing so because it may help somebody else.

JM: I would just make one caution there, too. Just because a food is... You’re right. It’s a new fad, a new trend. There are a lot of foods out there that are marketed as gluten-free. Just because it’s marketed as gluten-free, doesn’t mean it’s healthy. Because if they substitute poor-quality carbohydrates typically like corn or potatoes that don’t have gluten but nevertheless still a carbohydrate, they violate the principles you talked about earlier. [That’s] a huge distinction.

DP: I get that every day. I have this conversation with my patients. After three to four weeks, they come back and say, “We’ve completely changed. We only buy gluten-free cookies, cake, and bread.” I go, “Ha! [You] missed half the point. You got one point right but one point wrong.” You’re exactly right. You can
shop the gluten-free aisle, and sure enough, you’re going to kill yourself doing that because you’re just affecting your carbohydrate intake and insulin sensitivity. You’re exactly right.

**JM:** I used to see it all the time. When I was practicing, I treated lots of autism patients. I probably treated several hundred. The classic person came out in gluten-free and casein-free diet, thinking they were doing everything right. It was a big education barrier to get over with those patients.

**DP:** [There’s] no question. Unfortunately, we’re seeing people these days trying to market supplements that you might take to break down the gluten, so that it is less damaging to you. I think the mission here is to get people off of foods that contain gluten.

**JM:** Right.

[----- 1:00:00 -----]

**DP:** And educating them that 75 percent of oats, for example, contain gluten. It was published in the *New England Journal of Medicine*, and some of those are labeled “gluten-free oats” coming from gluten-free factories. Still, there is a risk of cross-contamination in oats in addition to kind of a high-carbohydrate load.

The notion of starting your day with a couple of 12-ounce glasses of orange juice and a great big bowl of oatmeal because it’s full of fiber, that’s not what we’re talking about here. People think… And you know, you and I both now live in Florida. Here, if you’re not getting orange juice… My goodness, what’s going to happen? Two glasses of orange juice is 72 grams of carbohydrates. That’s 18 teaspoons of sugar. That’s before your whole-grain cereal has arrived. It’s about education. You’re right.

**JM:** Yeah, that’s the key. Now, there are so many myths out there with respect to diet. I’ve got my personal pet peeves, but I’m wondering which ones you feel are the most important or maybe a single one or multiples that you’d like to address and you feel people need to be aware of.

**DP:** One we’ve talked about already, and that is that low fat is good for your heart and good for your health. That is so off-base. A low-fat diet is associated with an increased risk of breast cancer and colon cancer as published in the *Journal of the American Medical Association*. A low-fat diet is a surefire way to increase your body mass index – in other words, make you fatter and therefore increase your risk for everything you don’t want, including diabetes and Alzheimer’s.

I think that’s the biggest myth that I’m very happy to say seems to be turning around really to some degree based upon the literature that we’ve already talked about. That low-fat myth that was propagated in the late 1980s and early 1990s I think is finally receiving its just scrutiny. It is completely wrong. When you go low-fat, as we talked about earlier, by default, you go high-carb, because pretty much these diets have about the same amount of protein. Those are the only three variables. You’re going to need to get your carbs somewhere else. People go high-carb, and that’s the worse dietary recommendation.

The second myth is that (we just covered) there’s something healthful about the gluten-free aisle in the grocery store. Nothing could be further from the truth. The third myth is that we should base our food choices, the food pyramid, on whole-grain breads, cereals, pastas, etc. At the very top of the food pyramid, if you remember, was this tiny, little, and lonely bottle of olive oil. Here’s the myth: the food pyramid has relevance. If you want to know what to eat, take the food pyramid and stand it on its head.

**JM:** Sure. Turn it upside down, right?

**DP:** Finally, I’d say that the myth that you can eat whatever you want as long as you exercise and burn off those calories, it doesn’t work that way. Eating is job one. Exercise is important, and we talked about
it. But you’re not going to burn off those indiscretions, those carbohydrate indiscretions, by jumping on
the treadmill for an extra hour. You go to the gym, and you see a lot of heavy people on the treadmill. It’s
not for lack of trying; it’s because after they go to the gym, they reward themselves with the number of
carb calories that they think they burned already. That turns the body’s fat-making mechanisms on. It’s a
huge myth – no pun intended.

JM: Yeah, they…

DP: Maybe the pun was intended, I don’t know.

JM: Yeah. They’ve, unintentionally, of course, engaged in behaviors that basically inhibit the ability of
their body to turn on these fat-burning enzymes. They’re eating more carbs, and it just shuts down that
system and they can’t access the fat they have.

DP: That’s right.

JM: It’s so easy to do once you understand it because the body works so simply.

DP: I know.

JM: I mean, it’s just not rocket science. This is so basic and easy once you get the simple principles.

DP: I found and recommend a great book, Gary Taubes’ *Why We Get Fat: And What to Do About It*. It
just spells it out so clearly that what you just said is spot on. That is when you’re targeting your body with
these carbs because you think you worked out and you deserve them, you’re inhibiting the lipolytic
enzymes, those very enzymes that are stimulated by insulin, if I might add, that allow you to break down
fat and gain what you’re trying to gain.

This insulin thing tells your body, “Winter is coming, make fat and store fat.” Insulin inhibits your ability
to break down the very fat that is your goal in the gym. Reduce your insulin by reducing your
carbohydrate intake. Eat more fat, you’ll get thin. Eat fat, get thin. Who knew?

JM: Yes, indeed. Now, one of my passions (or concerns might be a more accurate statement actually) is
the issue of genetically modified organisms (GMOs). We’ve put quite a bit of resources into seeking to
bring an increased consciousness and awareness of this, and supported many direct ballot initiatives to
actually require states to label these products. I believe it’s such a pernicious problem because most of the
GMOs are designed to provide resistance against a pesticide, or to an herbicide more accurately, called
glyphosate.

DP: Correct.

JM: Which they’re spraying nearly a billion tons every year. It gets permeated into every cell of that
plant. You can’t wash this stuff off. We’re going to have massive problems with the future generations –
infertility and inflammatory conditions up the wazoo. I’m wondering if you can give us your perspective
on the influence of GMOs on brain health.

DP: It’s a very, very devastating situation. I mean, from just the perspective of epigenetics that our food
modulates our gene expression, no one has really ever explored what the effect of genetically modified
foods in terms of gene expression or the gene expression of the microbiome is. We’re now seeing
literature that relates the very herbicide that you talked about, glyphosate, better known as Roundup, the
effects of Roundup in terms of increasing gluten sensitivity. It’s a big circle, isn’t it?

What you said is very true. By and large, what this genetic modification of corn, soy, and other products
is all about makes the plant resistant to dying when the glyphosate is sprayed on it, so that we can just
contaminate the rest of the world with this poison, and therefore our exposure to glyphosate is growing by leaps and bounds. In and of itself, there’s the glyphosate issue, what that does to our health, and what that does to our microbiome, which is just beginning to be explored, as well as the effect of these perverted plant products, these genetically modified plant products.

I’m very, very worried about it. I am so taken by the failure of California to pass the proposition allowing at least the buyer to be aware that the foods that they buy may have undergone genetic [modification] and may contain GMOs. If it’s no danger, then why not let the population know that? Yet industry wins on this count. I think our health is without a doubt going to suffer from it. I think it’s going to be a much bigger issue than anyone can possibly imagine from each of those vantage points.

JM: Yeah. We did lose the vote in California. But what we did win is an increase in awareness and consciousness.

DP: No doubt.

JM: More people are being aware much more. I mean, it’s just radically increased the number of people who are sensitive to this issue. Along with GMOs, another challenge to brain function would be the use of antibiotics, or the inappropriate use or overuse of antibiotics might be more accurate. I’m wondering if you can comment on how that affects the brain. Is it different from the microbiome?

DP: Yes. Monday of this week when you’re not having this interview… Sunday night, I was reviewing some articles related to the brain, gut, and the microbiome. As I fell asleep, I was just all over this, about how important the microbiome is in regulating the set point of inflammation, producing neurotransmitters like serotonin, and really modulating all manner of brain health. The next morning, my first patient, a 23-year-old man, was brought by his mother. For five years, he’s just not been able to almost put a sentence together, living a life in brain fog, devastating fatigue, and joint pain.

I was bold enough to say, “You were on a lot of antibiotics just before this all happened, weren’t you?” He just looked at me as if I was clairvoyant. I’m not clairvoyant; I’m just doing a little, you know. Louis Pasteur said: “Chance favors [only] the prepared mind.” There’s nothing intuitive about it. He said, “How did you know? Was it because of my teeth?” And then I looked at his teeth, and they were stained gray from years of taking tetracycline for his acne.

You’re right. This overusage of antibiotics and even moderate usage of antibiotics is going to have a play in terms of brain health like we’ve never imagined. These kids who are not breastfed and who end up not getting (because they’re not breast-fed) inoculated with probiotic bacteria from the mother’s milk and prebiotics that are contained in the mother’s milk – in other words, the stuff that makes the bacteria – double their risk of ear infections and ADHD. Get the ear infection, pound that kid’s immune system and microbiome with antibiotics, and you are setting that child up for ADHD.

One of the fundamentals of our protocol for treating ADHD is probiotics, which is going to take some time I think to filter down to the pediatricians, who would much rather just write the prescriptions for the amphetamines. But probiotics reestablish gut health. Feed that child appropriately with good prebiotics, get the fat back into the diet, and cut the carbohydrates. That has an effect not just on brain metabolism but on the microbiome as well.

These are incredibly powerful leverage points to get that kid back on track. Let him be the number one student in his class. I say that because, as I mentioned earlier, I did a PBS program. I presented a case of a kid like that, wherein that’s all we did. We put him on probiotics. We gave him some DHA, which is an
omega-3. In a couple of weeks, the parents got a call from the school, thanking them for putting him on medication.

Again, Pasteur says, “Chance favors [only] the prepared mind.” That’s the mission here for your viewers and listeners: to gain this information and recognize that it’s a big world out there in terms of what affects the brain negatively and what you can do to fix that. It’s a very exciting time.

**JM:** Sure. I believe a physician, Hippocrates, said that food is your best medicine.

**DP:** That’s right.

**JM:** He was on medicine; he was on food.

**DP:** That’s right. “Let food be thy medicine and medicine be thy food,” Dr. Hippocrates writing in the journal of who knows what over 2,000 years ago.

**JM:** Thousands of years ago.

**DP:** Now we’re coming full circle. Now we are recognizing this beautiful relationship that we have not to dominate, not to take dominion over the earth as a solitary organism, but to recognize that we live as a symbiont on this planet and that we are in this beautiful symbiotic relationship with that whole universe, that whole social media, that goes on with the bacteria that live within us.

**JM:** Yes.

**DP:** It’s humbling. We are not the center of the universe. “Man did not weave the web of life; he is merely a strand in it,” Chief Seattle said. We recognize in a humble way that we’re just part of this huge social network that we call our bodies. It’s humbling but empowering nonetheless.

**JM:** Yeah. Just a comment, too, on the probiotics: my goal is to ideally not be on any supplement. I don’t know if I’ll ever achieve that, because there are some that are pretty useful to extend longevity. But one of the ones I’ve gotten off of was probiotics, the reason being is that I’ve been on fermented foods. The value of doing that becomes far more cost-effective and you get a much larger dose. In a few ounces of fermented foods that you prepare at home, you can get the equivalent of a bottle of 100 high-potency probiotics.

**DP:** Without a doubt.

**JM:** You can get a hundred trillion for virtually free almost.

**DP:** That’s right.

**JM:** Especially if you make them yourself. I just want to share this with you, too. We’ve spent a few years developing our starter culture, where you can do this. It has about a dozen of really highly beneficial strains and specific numbers of strains that will not only multiply and provide you with the benefits of the bacteria but make vitamin K2, which is absolutely crucial if you’re going to get your vitamin D levels to the levels you mentioned earlier. Vitamin D in high levels without K2 can be problematic. It’s basically a way to get K2 for free.

**DP:** How powerful is K2 in terms of a cancer prevention program as well. I put patients on K2 as part of what we do. They may come back from their internist saying, “You can’t be on K2 because you’re on Coumadin or blood thinners.”

**JM:** Yeah.
DP: Spend maybe a minute and a half, and realize that K2 really has nothing to do with that. We understand that what we’re doing with patients is giving them what their bodies need. Yes, that’s again why even patients who are on blood thinners like Warfarin are told not to eat any colorful vegetables. That’s a scary recommendation to make to anybody. Will it affect their Coumadin or their Warfarin? Of course, it will. You make the adjustment in the dosage. But by all means, people need those vegetables. Food is number one.

As I get more mature or more experienced, however you want to describe it, I am less and less recommending supplements, and more and more realizing that what we’re able to do by changing people’s diets is indeed honoring what Hippocrates said; it is indeed the most powerful medicine that we have.

JM: Yeah. It’s been my primary tool for most of my practice. We’ve probably exceeded the amount of time we should be sharing for this discussion, but it’s been so fascinating. Let’s close. Thank you for everything. I’ll let you give us your final statement and what you would want people to remember most about this.

DP: I didn’t know I was going to have a final argument here.

JM: No, it’s not an argument. It’s just a statement of what you think is important, so people can benefit from applying your program.

DP: Sure. Let me close – and I’ll let people interpret this as they wish – with a quote from the Yellow Emperor of 4th century B.C. who said:

“Maintaining order rather than correcting disorder is the ultimate principle of wisdom. To cure disease after it has appeared is like digging a well when one feels thirsty or forging weapons after the war has already begun.”

My call then is to welcome neurology, welcome brain science, to the notion of preventive medicine. That is to say that our lifestyle choices have a huge role to play in determining whether the brain ages gracefully and maintains its function throughout our lifetime, or we suffer from some neurodegenerative problem that could very well have been prevented.

JM: Well, that’s terrific. I couldn’t agree more. Good words to close on. I want to thank you for this interview and also want to congratulate you for your massive success in educating the public and for really being one of the leaders out there, the major leaders, in spreading this message of truth and how they can have massive change with their dietary choices.

DP: I surely appreciate it. Please know that I so honor the depth of your knowledge base and the depth of our interaction together, because I really think that this is an incredible form to really get information to those who really need it most. I thank you for that.

JM: Okay. Well, you’re most welcome. I’m just glad to have the opportunity to share the information with people.

[END]