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Announcer: Bulletproof Radio, a state of high performance.

Dave: You're listening to Bulletproof Radio with Dave Asprey. Today's cool fact of the day is that if you're feeling full, maybe you can blame it on your guts. It turns out that your guts bulging, not your stomach itself might be the real appetite killer. At least that's what a new study in mice suggests and it's probably true for people too. A lot of people complain, "Oh, that's a study in mice. It can't be true in humans." But there's things where you have a physiological way of saying, that really makes sense, versus that's some strange circadian reliant thing, not recognizing that mice have an opposite circadian rhythm to humans, stuff like that. This is what I'm going to believe applies to us. This comes from UCSF and the researchers there identified and studied nerve cells in a mouse's intestines that sense mechanical stretching.

To stimulate full intestines, they activated nerve cells with light and chemicals. By the way, that's so biohacker cool. As a result, the mice ate less food and physically stretching intestines with a salty liquid or a diuretic also caused mice to eat less. Different stretch sensing cells in the stomach also curb the mice's appetites and to a lesser extent. It's really interesting that those nerve cells send messages up the vagus nerve, which then sends signals to the brain and those messages about stretching of intestines help to influence the eat or not eat decision, at least according to the theory from these researchers. You know about the vagus nerve, I've had lots of podcasts about that. It's one of the things that we hack at 40 years of Zen. Stephen Porges, the father of polyvagal theory has been on the show a couple of times. You should hear those interviews, they're awesome.

But what this means to you is that basically there might be new ways to treat obesity or even dare I say, make sure there's enough fiber for those things called vegetables in your diet, that would keep your intestines a little bit stretched so your vagus nerve would be happy and one thing leads to another pretty soon. What do you know? You look the way you want to look. Speaking of looking the way you want to look, if you haven't read Superhuman yet and you're a fan of the show, well you don't have to read it. Just download the audio book because I read the whole audio book, and if you think I prep for a show, which takes about eight hours to prep for a show for you, imagine how many thousands of hours of prepping goes into writing a book like that.

It's my book to hit the New York Times for multiple weeks in a row, which is an honor. So everyone who's read it says, "Oh my God, I think it's your best book, Dave." So if you haven't read Super Human, you got to get it.

Today's interview is with one of my favorite guys, a guy who recognizes straight up that lectins, one of the plant toxins that are out there, one of the plant toxins that I also account for in my recommendations really matter is on, again, the guy who, aside from his fame for lectins, really deserves fame for his incredible background as a cardiologist and being a renowned heart surgeon, celebrity doctor, New York Times author, and basically all our own superhuman doctor. I'm talking about none other than Dr. Steven Gundry. Steven, welcome to the show.

Steven Gundry: Hey, thanks for having me again Dave. Great to see you as always.

Dave: Now, if you're a longtime listener, you know that Dr. Gundry has been on the show a couple of times. In fact, there's also a special private interview with him that's part of the audio series that you get when you send me your receipt for buying Super Human. I have him on more than a few times because man, this guy has deep knowledge on longevity and his book, *The Plant Paradox*, and now he's done what I did with the Bulletproof diet where I wrote a cookbook. It's like, okay, here's what you need to know, here's why it all works, but how do you actually do it? The new cookbook called *The Plant Paradox Cookbook* just came out. So I said, "Hey, Dr. Gundry, why don't you come back on the show? Let's talk some more about your work and let people know that you've got a new book out that's definitely worth a worth reading so you can figure out how to cook so that you don't eat inflammatory plant compounds.

Talk to me about kids. How important are lectins for kids Dr. Gundry?

Steven Gundry: I wrote this book, *The Plant Paradox, Family Cookbook* because actually, people don't know that when I was a professor at Loma Linda University of surgery, I was also professor of pediatrics and was a fellow in the American Academy of Pediatrics because my interest was at the time also in kids' hearts and kids cardiology. But in my role over the last 20 years, seeing illness of autoimmune diseases, a huge number of my patients are families whose kids have autoimmune diseases, whether it's type 1 diabetes, whether it's juvenile rheumatoid arthritis, psoriasis, eczema, you name it. These families said, okay, our child no longer has juvenile rheumatoid arthritis or we're reversing some of the markers of pancreatic attack with getting lectins out of people's diets, but how do I successfully keep my kid on this program with all of the 10 patients out there. Help us.

I also have two young grandchildren and two years ago, my daughter's husband, I guess just to keep me quiet, switched over to my program, and both she and her husband lost 60 pounds each over the last two years, and their kids, my grandchildren, who were three and five years of age, have for the last two years, been eating strictly a plant paradox lifestyle. They said, "This is a great motivation for you, for your next book to feed kids, make it easy to feed kids." One of my motivating driving forces is I want people to have food they love but that loves them back. You and I think both know that most of the foods that we

have been taught to love have the exact opposite effect on us. They certainly don't love us back.

Dave: It's funny because my kids have been eating a kind of a low lectin diet. In my understanding of things, some lectins are way more aggressive than others.

Steven Gundry: Yes.

Dave: I've noticed a difference between my kids, my daughter. She can actually eat a white potato and she doesn't seem to have any negative effects. I don't think it's good for her, but if she has a little bit at a party, it doesn't matter. My son though, he'd come home and he'd say, "Daddy, my neck really hurts." It would go on for weeks, and he'd say, "Can you rub my neck?" And he'd have these weird knots in it. Finally, we went to the school and it turns out they were putting potatoes in the soup that they were serving the kids. I said, "All right, Allan, we're going to just send you with your own soup." Within three days, his pain goes away and doesn't come back. He's at the point now where he's a potato, he goes, "I don't want to eat that. I don't like it when my neck hurts."

I contrast that with my childhood. I was in constant upper back pain, knee pain, joint pain, and I'm sensitive to potatoes, he's sensitive to potatoes, my daughter's not. Is there some laxity? How perfect of a plant paradox diet do all of us have to follow to get these results?

Steven Gundry: I think there are absolutely what I call people who are canaries, the so-called canary in the coal mine, who are absolutely super sensitive to really most of the major lectin containing food groups. They may have one that's a particular or a bunch of them that are particular. For instance, I learned from my patients with rheumatoid arthritis that a lot of my patients would kind of go on an almond flower cook. They'd buy all these wonderful cookbooks, making everything out of almond flour. A number of them, their pain came back and they were actually buying the almond flour at Trader Joe's that was made from whole almonds with the peel on them.

And little by little I discovered that the peel on an almond has some lectins that some people are going to react to. I think that accounts for the cultures, particularly in Spain and Portugal, that mothers teach daughters how to soak almonds to get the peel off because no one in their right mind would eat the peel on an almond, like a Marcona almond. In Italy, I have yet to find a chef that doesn't know you don't make pasta sauce without peeling and de-seeding tomatoes. His mother taught him and grandmother taught her and that's just accepted wisdom. I think people have a way of figuring this out. I know with the kids that I treat that it's amazing. These kids are very sensitive to changes and they'll go over to a friend's house and say, "Oh, I have a couple of bites of pizza.

For instance, like with Crohn's, they'll feel it within an hour in their gut. They go, "Ah, why did I do that? That wasn't worth it." That's the long winded way of

saying there are certain people who absolutely should not come near these things. On the other hand, like I talk about in all the books, I think the more we protect our gut wall, the better our microbiome diversity, then quite frankly, there are bacteria that loved eat lectins. There are actually bacteria that eat gluten, which is a lectin, by the way. The better defense system we have and the thicker the mucus lining on the wall of our gut, the much more difficult it is for a lectin to get to where it wants to go, which is actually the surface of the enterocyte to bind to it, flip the zonulin switch and off to the races.

Dave: On the cover of The Plant Paradox Family Cookbook, I think I'm seeing meatballs with tomato sauce and pasta. Say it isn't so Dr. Gundry. Tomato sauce and pasta, what's up with this? It can't be the zucchini noodles cause you don't like zucchini because it has lectin, so what's up with the photo?

Steven Gundry: Those are sweet potato noodles.

Dave: All right.

Steven Gundry: That is a tomato sauce, but it is pressure cooked and the recipes, most of the recipes in the book use one of the modern pressure cookers like an instant pot. The cool thing about pressure cooking is [inaudible 00:12:09] for the gluten containing grains, pressure cooking will do a pretty doggone good job of destroying lectins. The idea of soaking, for instance, beans, soaking beans with multiple changes of water definitely decreases lectins. Heat decreases lectins. But there are very valid papers that show that's probably not enough for very sensitive individuals. The pressure cooker will solve the problem to their credit, the hidden brand of ... not only so they're beings, but pressure cooks their beans in a non-BPA can. I'm actually a big fan of those.

But the instant pot or modern pressure cooker, and again there are numerous variations like a Ninja Foodi for instance, is a really great thing for families to use because the other reason I wrote this cookbook is that families like my daughter and her husband have jobs, they have to get their kids to 27 afterschool events and the temptation is, ah shoot, we're also busy, we're all so tired. Let's just grab fast food on the way home. Let's grab a pizza, let's order Grub or Uber to deliver and it'll be okay. Well, it's not okay. The studies that come out that show, the sooner we start our kids eating properly, and I think you and I would agree what properly might be, you set them up for a lifetime of successful health.

As a children's heart surgeon, I can tell you that I could open up the aorta, the main blood vessel that comes out of a kid's heart when they're eight or nine years old and already see plaque in their aorta and that ought to scare any parent to death that an eight or nine year old kid could have plaque in their aorta.

Dave: Now, what's causing that plaque? This is bacteria in the gut?

Steven Gundry: I happen to think that it is leaky gut or leaky mouth. I think they're actually equivalent, but we are releasing not only lectins through the wall of the gut, but bacterial pieces, which are non-living bacteria. There are pieces of cell wall bacteria called LPSs, Lipopolysaccharides. As you know, and the books called them little pieces of shit because that's what they are. The other thing, I've recently presented two papers at the American Heart Association vascular biology meetings that would suggest, I would think it would prove, but I'll at least say suggests, that lectins are a major cause of an autoimmune attack on the surface of our blood vessels that recruit white blood cells to cause inflammation on the surface of blood vessels, and that makes cholesterol get into this inflammation.

I don't think cholesterol per se is the evil empire that people would like to make it, but if you reduce lectins in a diet, then I've shown that those markers of autoimmune attack on blood vessels dramatically decrease, and if you reintroduce electrons in the diet of those markers go back up. yeah, I think we, as you know, our kid's diet is one wonderful bit of inflammatory food after another.

Dave: Now, you and I are both horrified by the kids menus that you see at restaurants, where my 14 year old, exceptionally healthy [inaudible], who doesn't have lipomas, these little fat masses all over him, doesn't have cancer, his health isn't falling apart, I wouldn't feed him the kids' menu at any of these restaurants, and I certainly wouldn't feed it to my kids, and my kids know. They're like, "Oh, that's for coloring. We order off the menu that has real food." What is the typical kids' menu due to children's behavior?

Steven Gundry: I'm very fond of a study, it's called the Appleton Wisconsin Food Study. Appleton, Wisconsin, I visited. It's a lovely community North of Milwaukee. And they had a junior high school, middle school with actually some typical middle school behavior problems, truancies and lots of trips to the vice principal's office. And they got this crazy idea that there was an organic cafe bakery in town. And they said, "Hey, why don't we have this ... let's contract with this cafe to provide breakfast and lunch for the school and we'll bring all the parents in the PTA and we'll teach them how to duplicate as best possible, these organic meals at dinner. And let's see what happens." Interestingly, this is published, truancy rates went down, behavior improves, school test scores improved. They were so impressed that the cafe was kind of getting overwhelmed, and they said, "Well, this is great. We'll contract to have this done by an outside food service provider."

I won't tell you who they chose, but they supply a lot of places in airports and things like that, very much hotel corporation. Maybe I've given too much away. But anyhow, when they contracted for this, lo and behold, what they thought they were getting is not what they were getting. All the test scores went back down, the truancy went up, the discipline went ... It's just a remarkable study. I think that that study in and of itself kind of shows you the power of food. But as I talk about in the book, this for instance, the new data shows that the mother's

eating while the baby is in her while it's still a fetus, absolutely impacts [inaudible 00:19:19] develop that intelligence and actually the type of cholesterol that that kid will make. The sooner we start mom eating the right way, eating for her child, and the sooner mom's starts feeding her child properly, the better the kid's going to do in school, the better behavior the kid's going to have new.

You and I know you take one trip to Disneyland or Disney World and you can see the effect of the typical American diet on behavior.

Dave: It warms my heart to hear you with your credentials, just the amount of time and energy and work in the broad disciplines of medicine that you've done. To say that my very first book took five years to write. It's called The Better Baby book. It's what do you eat three to six months before pregnancy and during pregnancy to have the healthiest, smartest, least autistic kids you can possibly have? That was jeez, a long time ago now, in terms of research, but what you're saying now, I'm seeing in my kids and I've had hundreds of people stop me at conferences and airports and all and say, "Dave, thanks for the babies. We couldn't conceive and now, this works and my wife's fertility consulting practice is based on it." But you said it straight up, what happened when you were eating and there was a baby in the womb, it sets it up. Now here's my question for you. Do you think it's because the maternal microbiome, the mom's gut bacteria are changing as a result of their diet and that is what's sending the signals to the fetus?

Steven Gundry: It's not only that. We now know that there is an actual fetal microbiome.

Dave: Yes, we do.

Steven Gundry: Yes, we do know that, and the placenta is not sterile. It has its own microbiome. The idea that this is a privileged status that all of us believe is simply not true. You're right, it counts before the baby is conceived. And you're right, there are so many women who have a vaginal microbiome that is absolutely spermicidal because of what she eats. I have a number of my own patients who, she could not get pregnant and lo and behold, we changed her diet and threw in a bunch of polyphenols, but that's another subject, and lo and behold, she gets pregnant. So, what the heck? There's so much that's coming at the forefront. I hate the word [inaudible 00:22:26], about the power of this incredible ecosystem that lives in us and on us. Shame on us for thinking that these little one-celled creatures don't matter much. But with every passing day, the power of the microbiome to affect everything that happens to us is shocking.

Dave: It is truly shocking to the point that I just wish I would've known this when I was a kid. The amount of suffering, the amount of behavioral things, all that stuff, just the brain fog that was caused by food when people would say, "Oh, food can't cause that. It's just how you choose to behave." There are some things though that let's say someone listening to this, all right, you've probably heard several hundred episodes this point, you might believe some of that, but there

are questions that keep coming up. One of them in listeners is, I've been down on oats for a while saying, look, they're a grain, and you are also really down on oats. Tell me why oats are a bad call for kids or adults.

Steven Gundry: My oldest daughter is actually a horse woman and she taught me many, many years ago that the only purpose of oats is to make horses fat for the winter, and she's right. Oats in horses actually turn into a really cool opioid like compound. Horses will literally knock you over to get to a bucket of oats.

Dave: This is true.

Steven Gundry: They're that addictive. I see it when I'm with her on the ranch. It's impressive. They've knocked me over. Go away, that won't happen. Boom. That's number one. Number two, anyone who reads anything anymore will realize, of a recent study looking at the levels of glyphosate roundup in common oat products, I think it was 33 different oat products, including cereals, granolas, energy bars, and almost all of our routes in the United States [inaudible 00:24:51] are dark contaminated with glyphosate. Why would we be feeding a known antibiotic to our kids to destroy their microbiome at breakfast? We know this now, so why would we give this to our kids?

Dave: What if it's organic oat cookies? They're organic.

Steven Gundry: At least in my experience with my practice, oats have a number of lectins that cross react with wheat gluten. The immune system can't tell the difference. Interestingly, with some modern toasts, we've discovered that about 70% of people who are sensitive to gluten, and there's a lot of people who are, will cross react with a lectin in corn and think that corn is gluten when they eat it. About 70% [inaudible 00:26:02].

Dave: The zein is the gluten?

Steven Gundry: Yeah. Well, that's one of them. But actually the wheat, corn protein epitope as is the one that cross-react. Also, there are, as the GMO corn one, that's the zein, and it did not exist until the GMO corn, which is now the standard.

Dave: So, in our house it's don't eat the gluten free stuff made out of corn because you don't feel good. Since my kids are used to feeling good, like they start getting cranky and their stomach hurts and they get a headache or they feel anxiety. Something pretty amazing happened last night. I'm a big fan of dark chocolate, at least if made without mold, and a lot of the fermentation stuff in there, it does have mold in it. I bought a \$10 chocolate bar, is a really nice high-end single estate Peruvian thing. I'm not going to name the brand because I don't want to point fingers. It was 81% dark and it was really good, the perfect mouthfeel. So, I eat it and my son eats it, and half hour later I'm kind of passing out a little bit there. I know the feeling of getting mycotoxins and stuff. My son

though, doesn't get that, but then at bedtime, he's got all these really strong anxiety, all these emotions.

This time though, he said, "Daddy, what do you do?" He said, "I know that this isn't my emotions. I know this is caused by the chocolate because I felt this one other time I ate chocolate." So how do I get rid of this feeling because I don't like it." I'm like he's 10 and he was able to say, oh, this is an emotional symptom driven directly by food. In this case, it wasn't actually a lectin from the chocolate, it was something else. But they have the same sense. "Oh, I ate that. I didn't feel good." What I think most kids and most adults have lost, they don't know what feeling good feels like because they're always eating corn, oats, glyphosate, deep fried chocolate bombs or whatever the heck they're eating. I don't know, but is it reasonable to expect adults or kids to know what feeling good actually is anymore?

Steven Gundry:

No, and that's really one of the problems. We are so used to feeling bad that we really forget what feeling good is like. I'll give you an example from transplantation. Now, I'm a heart transplant surgeon, but also did a lot of kidney transplants in my training. You can take a person who has got a lousy heart or allows a kidney and they get used to a certain way of feeling. And then we give them a new heart or a new kidney, and within 24 hours,, the first thing that they say is, "Oh my gosh, I forgot what feeling normal feels like. I'm so use to, that was what I thought was normal. Now, that wasn't normal at all, but I wouldn't have known that unless ... and now I have a normal heart or a normal kidney."

I think the same thing is true with food. We are so sick and tired of feeling sick and tired, we just don't have anything to compare to anymore. One of the reasons that my program has gotten so much traction is that I tell people, "Look, you're going to me for a couple of weeks and then you're going to actually start liking me." It's actually pretty true because we're withdrawing from a lot of addictive substances, but then you start actually remembering feeling good and the microbiome, and all of a sudden, you get some pretty good stuff coming up to your brain that wasn't there before.

Dave:

I've found that when people go on a two week program of just eliminating crap, and I'll even go so far as saying, even if you go vegan, which is not a health path to go down, but even if you go on that diet, you're cutting out so much crap, you're going to feel better. But then after that two weeks, if you go back to whatever it is you were doing before, that first day, you feel really awful. In fact, I've heard people say, "Okay, I tried this. I eliminated a bunch of stuff and when I started eating again I became more sensitive to it. I handled it okay before, but now I can't touch this stuff." What's going on there?

Steven Gundry:

After 20 years of doing this with patients, that's almost a universal comment, that more sensitive to these things now. I think it's two things. Number one, you are re-exposing yourself to something that you had been fairly tolerant to and now all of a sudden you can actually see the difference you couldn't feel before. Yeah, it's fascinating. I find that particularly useful with kids because in kids, the

peer pressure with kids and the opportunity to eat crap is always omnipresent. I have to write prescriptions descend to the school cafeteria that no, this kid gets to [inaudible 00:31:49] food from mom that she cooked or she made and he's not allowed to participate in the cafeteria lunch even though it's got the government guidelines.

Believe it or not, one of my mother's, a teacher sent home, this is recently, sent home a note that said, "Make sure that Johnny brain's whole grain breads school, and you are a bad mother." Seriously, this is a note.

Dave: I love teachers like that, like you're so not going to like what happens.

Steven Gundry: Yeah.

Dave: Even with my kids, they've both come home at different times and said, "I don't understand it. It's only 10:00 in the morning and the teachers telling us we have to eat. Why are all the other kids hungry? We just had breakfast at 8:00. Why do we need to eat at 10:00? I'm not hungry." So, my daughter's like, I just eat one nut so I can say that I ate, but I really didn't want to." It's usually a macadamia nut.

Steven Gundry: [inaudible 00:32:57] good.

Dave: Okay. I'm going to ask how we're going to fix the school recommendations there. What is your advice for a parent who has a teacher or a school system that's trying to force them to feed their kids' stuff that makes their kids misbehave?

Steven Gundry: At the end, the child is ultimately the parent's responsibility. It's not the school's responsibility. We could go off on that tangent for hours, but you have to be the protector of your kid. If you are an in-tuned parent who you know looks at their kid's behavior and you try something like your program or my program and definitively notice that your kid feels better, he's not getting sick, his behavior at school is better, his school performance is better, there's really good studies showing that kids who eat right have much better performance. Kids who have better Omega-3 levels of better performance. There's really good data and it's all in this new book to support a parent. If nothing else, take that page from the book and put it in front of the teacher and say, "Oh, that's interesting. Look at this."

Dave: It's also fair to say, "Hey teacher, you're trained as a teacher and I'm not going to tell you how to do your job. You're not trained as a nutritionist. In fact, if you're a dietician, you're probably trained in the wrong stuff anyway. Sorry, there are some dieticians who've come around, but a lot of the American dieticians should be called the American diabetic inducing society if you look at what they're feeding people in hospitals. Bottom line is you're just not trained teachers. So I know you read reader's digest, I respect your ability to teach, I'm

not going to tell you how to teach. You're not going to tell me how to feed my kids because you are not an expert and I as the parent am an expert in what foods cause what behaviors cause I see their behavior 24 seven and you only see them for an hour in class.

Let's just agree. I'll feed my kids. That said, I do see kids who show up in school and there are oftentimes, and parents have recently watched some misleading documentary that I wrote a piece about on the Dave Asprey blog. And said, "Oh, so my kids are vegan, they're having a green apple for breakfast." The kids come to school and they're bonkers, they can't control themselves. I couldn't control myself if I had a green apple for breakfast. I suppose a teacher has a role in that, but bottom line is it is the parent's job. So, calling a problem is important. What you said there, look, if you are listening to this and your kids are just eating whatever the heck the school feeds them, you're missing a massive thing. Whether you buy Dr. Gundry's new family cookbook, whether you go on the planned paradox program, you do the Bulletproof Diet, the Better Baby stuff, look, we're probably 80% in alignment here and you can try one, try the other.

I don't even care which one you try, try them both. You might find that there's something in the middle. It's totally though such a low hanging fruit, if you don't experiment to find out what's going to make your kids do that, you're losing out as a parent. One is, everyone wants their kids to succeed, but look, do you like sleeping at night? If you feed your kids right, they won't be up every hour peeing all night long. They will sleep all night, they won't have nightmares, they won't get in fights at school, and if they do, they'll win. You just can't lose. Speaking of fights at school, this is like the best segue I've ever done as a podcaster. There's something in your book that I wanted to call out and ask you about. You say in your book that bullying impacts diet? In what ways?

Steven Gundry:

Yeah, when you look at, for instance, Omega-3 levels and you look at serotonin levels and you look at behavior issues, this all actually stems from the gut microbiome and even leaky gut. There are some pretty doggone good studies, in both animals and in humans, that implicates the unfortunate behavior that we now accept as normal of bullying as actually a sign of dysbiosis in the gut. You can actually correct that. You can actually take animals and change their gut microbiome and they will become far less aggressive, they will be much friendlier, they will not eat their children. In fact, you'll like this. Years ago I was exposed to one of the original nutritionists in America by the name of Gaylord Houser. He was probably the first celebrity nutritionist, and I won't bore the story about Gaylord Houser, but he used to have fat farms around the world among other things.

He ran all the Elizabeth Arden fat farms. Gaylord Houser, one of my pain patients, who lived to be 106 who, Edith Murray, was a huge Gaylord Houser fan. She gave me most of Gaylord Houser's books. I was just looking this weekend, thumbing through one of his books, and you'll like this study. He was, as we all were interested in the Hunza tribe in Northern Pakistan, and there was a study back in, I think the 1930s and I forgotten the doctor's name. He decided

to take a bunch of mice and put them on the Hunza diet of four mice, and these mice lived two and a half years and never had an illness, never had anything, were friendly, never ate their children, their babies.

And then he took the same group of mice and put them on the standard American diet and lots of refined carbohydrates, some wonderful fats, cooked milk. These mice, not only did they live long, but they were aggressive. They ate their own children, they ate other mice, and they got all the diseases of Western society. They got cataracts, blah, blah, blah. This is back in the 1930s, and it's like son of a gun, mice eating babies when they're eating the standard American diet. It just jumped off the page at me. I went, of course we've got bullies in schools.

Dave:

It's true that when you eat the wrong stuff, it creates a very low level sense of stress and anxiety, like something's attacking you. And it is, it's the food you ate. When you're in that state, you see decrease in heart variability and increase in fight or flight response. You're already a kid, you're already looking to do all the emotional development that you have to do, even if your health works, it's still hard to be a kid. On top of that, now you feel this anxiety, so the odds of you punching another kid instead of yelling at them or instead of learning how to work it out, it's going to go up and you do this population wide and then you start saying, "Okay, this kid had a good biome, but three other kids who weren't, well, there was still a bullying incident."

It's a big deal. I'm glad you're calling that out because people have enough nutrients. I've had several interviews about that around kids behavioral stuff. Even things like schizophrenia, and I'll go down, oh, you were short on copper, you needed some zinc. When you do it for kids, I feel for it when you see a little kid just out of control, like maybe it's just all emotional trauma, but maybe it's nutritional and trauma and they might've handled that trauma if the nutrition was there.

Let's talk peanuts, and in the Better Baby book, I said, "All right, don't eat peanuts." There's plenty of reasons not to do it. There's a very long chain fats, there's the mycotoxin-aflatoxin connection, there's the lectin issue. They're just a terrible food as far as I can tell. But since then, some studies came out that said, okay, maybe if you give small amounts of peanuts, very small amounts to kids, they're less likely to have an allergy to peanuts. So I was thinking maybe I was wrong there. There are only a couple of things I think I got wrong in the Better Baby Book. It stood the test of time for eight years, which makes me feel good. But I thought maybe I got that one wrong. Maybe a little smidgen was a good idea, and you're standing up saying, "Ah, no, that's a bunch of BS." Why is that approach of kind of inoculating kids with little doses of peanuts, why is it a bad idea and in your experience?

Steven Gundry:

Well, in the Plant Paradox there, I quote a study that shows that 95% of humans have a preformed antibody to the peanut lectin. Number one, why would you even challenge a preformed antibody to a peanut lectin by giving lectins? Yes,

you can probably induce tolerance, but there are three good papers in red velvet monkeys and rhesus monkeys giving them peanut oil and producing atherosclerosis, and if you take the lectin out of peanut oil and repeat the experiment with lectin free peanut oil, they do not get atherosclerosis. Some of my critics said, "Well, that's ridiculous. A red velvet monkey is not a human."

Come on folks. Why would you expose a kid to something that they should not be exposed to in the first place? There's no human need for peanuts. I went to medical school at Georgia, and God bless Jimmy Carter. It's not a nut, it's a bean. None of us were exposed to peanuts until 500 years ago when Columbus started bringing them back. It's just not a good idea.

Dave: Counterpoint to that Dr. Gundry, there are kids in my kid's class who are saying, look, if there's a peanut in the room, then I could die. Therefore, like I'm so sensitive to it. Would those kids have benefited from a little bit of tolerance?

Steven Gundry: I'm glad you brought that up because as you know, we see this epidemic of allergies where there were none before, and that's because our immune system is so hyper activated because of leaky gut, that even things that would normally your immune system would go ah yeah, that's a nasty protein, but your microbiome teaches your immune system, yeah, yeah, but you don't have to get all upset about this. We're not going to bother you as much as you think, and the immune system stands down. I'll give you a personal example. Growing up, I had horrible allergies, had allergy shots all through my teenage years, college could get anaphylaxis from just a little ragweed shot. Really fun.

I don't have any allergies anymore. Do not have allergies. You could wave ragweed in my nose and nothing would happen to me anymore.

Dave: It wasn't the allergy shots that fixed it, was it?

Steven Gundry: No, I changed my diet. The nice thing is I've reeducated my immune system. Because I don't have a leaky gut anymore, and they've stood down. I think the fact that we have all these peanut allergies where we didn't before and the same number of people have an innate antibody to the peanut lectin just means that the problem is not peanut. The problem is our immune system is on hyper overdrive 24/7, and that's what we have to fix, not giving kids little bits of peanuts.

Dave: So your approach is basically feed your kids right and feed both parents right before and during pregnancy and have a proper environment in your home, and magically you won't have an overactive immune system, and even though your kid doesn't eat peanuts, they're not going to have an overactive response to peanuts.

Steven Gundry: Exactly. Seems like a much better way to fix this.

Dave: It does. I've looked at them, at peanuts for a long time. We know the most cancer causing highly inflammatory substance known to man is aflatoxin, which is endemic in peanuts. So they said, oh, it's common, so we'll just set a limit that's okay. The proper level of aflatoxin in humans is zero. So eating foods that have at an acceptable level that's higher than zero means you shouldn't eat the foods. Then, there's the very long chain fats, which are overrepresented in Alzheimer's brands. These are long chain fats, saturated fats that are so long, they don't fit in our cell membranes and they have to fit in sideways, so the cell membranes don't work anymore. Why do I want my kids to eat those?

So my kids don't eat peanuts and they've probably had them once or twice and they didn't die and probably had an upset stomach afterwards. I don't remember. But it's just kids. Those weren't one of those many things that people think are food that aren't food unless you're starving to death, in which case you eat what you're going to eat and you take the hits.

Steven Gundry: Right.

Dave: What are some of the most popular swaps that you have in the plant paradox kitchen where you talk about swap. You said sweet potato noodles were better than obviously flour noodles, but don't sweet potatoes also have lectins in them?

Steven Gundry: They're primarily in the peel, believe it or not. I actually, with some of my really sensitive kids, have the parents pressure cook the sweet potatoes and that solves the problem. Peel is the main protective part. There are some interesting toxins in cassava that are actually pretty well destroyed by just plain heat.

Dave: You said toxins in?

Steven Gundry: In cassava.

Dave: There's a form of cyanide that can get set loose in cassava.

Steven Gundry: Yeah, exactly. Yeah. So, do I think that everybody should eat tons of cassava chips? No. Like with anything, you don't want people eating tons of kale.

Dave: Yeah. Plus it tastes bad, down with kale down. Sorry.

Steven Gundry: Down with kale. George Bush with broccoli and you with kale. That's what you're going to be remembered for, but that's ... The swaps are really easy to make. There's a lot of flowers now that you can really fool anybody into having a great tasting food. For instance, we were just, at Gundry MD this past Friday, whipping up some green banana flour pancakes that have mouth feel and the texture of the best kind of soft squishy wheat pancake. We were actually very impressed and we didn't feed it to kids, but we passed it around. You can [inaudible 00:49:08] these textures from coconut flour, almond flour, cassava

flour, TigerNut flour. I'm actually a big fan of TigerNut flour. It needs to have a more mainstream audience. We give swaps in the book and you can have pancakes, you can have waffles, you can have muffins, you can have cookies, you can have cake.

There's a fabulous olive oil cake in the [inaudible 00:49:37] not made with white flour, whole wheat flour, God forbid. Lest you and I need to remind anybody the idea of whole wheat pasta to an Italian would just be the craziest thing they'd ever heard of.

Dave: It kind of like brown rice to a Japanese.

Steven Gundry: Yeah, like brown rice to a Japanese.

Dave: No, we figured out how to get rid of the toxic part to eat the white part. Thank you. Okay, what about sweeteners? This is the hardest part. Artificial sweeteners, you and I both know, listeners all know those things mess up your gut bacteria, they mess up your brain, you don't eat those. You give them to kids? You want to watch your kids go bonkers? Give them some artificial colors and artificial sweeteners and just have the worst day of your life as a parent. What do you recommend for that sweet taste in your pancakes?

Steven Gundry: There are sweeteners that are reasonably safe, Stevia is reasonably safe, Monk fruit is reasonably safe. Xylitol and Erythritol, if you use too much you will [inaudible 00:50:45] people get some pretty interesting diarrhea or loose stools or cramps.

Dave: You'll know it, yeah.

Steven Gundry: You'll know it. You'll know that threshold. I think Allulose is interesting. Not enough known about it yet, but I think it's going to be okay. There's some other interesting sweeteners that come up in-

Dave: One quick comment on Allulose, because you know I formulate stuff and you do too. I've looked really deep on Allulose, I cannot find a non-GMO source of Allulose right now. So if you're getting Allulose, it comes from genetically modified corn.

Steven Gundry: That's true.

Dave: The studies are great on Allulose. I've had times where I, I'll buy various bulk whatever things, including Allulose and I eat them. That's not right. I can tell something bad happened but I eat a different batch or from a more expensive vendor and that one doesn't have it. So there's quality issues that I think matter. But yeah, I'm agreeing with you. I want Allulose to become, the raw ingredient suppliers who are listening to the show, and I know a lot of you guys do listen, get us an organic or at least a non GMO identity protected Allulose already. I'm

ready to use it. All right. Sorry. Keep going on your list, but that just what I'm saying.

Steven Gundry:

No, you're right. The other thing I think that it's important, you and I would probably agree with this is retreat from sweet. We are suite seeking creatures. Two thirds of our taste buds are sweet sensors. They are not sugar sensors, they are sweet sensors, and we are driven to find sweet because way back when we gained weight by eating fruit in the summer and all great apes gained weight by eating fruit in the summer. We are sweet seeking creatures. But part of the problem is when you eat non-caloric sweeteners, whether they are artificial or non-caloric, your brain gets fooled into thinking you ate sugar and where is the sugar? You got cheated and you should go back and find some more. For instance, even Stevia actually increases insulin levels. To me, increasing my insulin level is not a good thing.

I think retreat from sweet really should be a mantra. You have to train your taste buds to become tolerant of less and less sweetener. I say, okay, look, you're used to, I won't use a trade name, but you're used to an artificial sweetener in your coffee. Buy yourself a Stevia base sweetener, put a half as much you want than normally, you'll hate it for about two weeks and then it'll taste as sweet as it used to. Put a quarter of it in, and you'll hate it for a couple of weeks and then it'll be as sweet as it used to, and you can retrain your taste buds.

Dave:

It's totally true. Happened to me. I used to love my soft drinks back when I was in my early 20s, and I don't do that anymore. And if I take a sip of one, it's horrifying. You want to spit it out. The proof in the pudding here is, my kids are the same way. They take a sip and they go, "Oh daddy, this is too sweet, I don't like it. Okay, I give myself parenting points for that one. Dr. Gundry, your work has really helped a lot of people see that there's plant-based stuff isn't all harmless, just like animal-based stuff isn't all harmless. Those categories don't necessarily matter that much to be perfectly honest because you have to have the details and you have to have the why's in the hows and what to do, and it does come down to the gut, it does come down to the bacteria.

This is the first interview we've done together where we really got into kids and what it's doing to behavior and brains and things like that. I also appreciate the amount of work that it takes to create a proper cookbook for anyone. It's way more work than most people listening would think. Like, oh I just tossed some recipes together. But no, when you narrate it, you create the science, you create the recipes, you test them. It's a multiyear process for most authors. So thank you for going to that amount of work. If you want to know how to cook, you want to know how to use one pot, this is a good book. It's a book that's on my shelf as well. The plant paradox kitchen, wait, the plant paradox ... you haven't [crosstalk 00:55:23].

Steven Gundry:

Family cookbook.

Dave: Family cookbook. The Plant Paradox Family Cookbook. If you haven't decided to feed your family in a certain way, pick up a few cookbooks that are in alignment with this kind of thing. There's stuff in the Paleo Primal, there's the Bulletproof Diet Cookbook, the Plant Paradox Cookbook. Get several, try the recipes. I'll tell you, Dr. Gundry understands the why and the how and the details. Oh, you don't blacken this thing because it doesn't work. If you take his recipes and you cook them different, it's not going to work. It actually matters to the level of precision here. "Oh, I just was lazy. I didn't pressure cook it." What do you know you got gas, didn't you? Well, that's because it only works if you do it right, and that's why this is a book that's worth your time to read and cook from.

Dr. Gundry website, drgundry.com, G-U-N-D-R-Y. Thanks for being on the show.

Steven Gundry: Thanks again, appreciate it. Let's all feed our families as good as we can.

Dave: Full agreement there. If you like today's episode, feed your family something really good, and if you decide you're going to read the Plant Paradox Family Cookbook, you're going to read any book actually, do the author of favor, just like you would if you were leaving a tip at a restaurant, go to Amazon and leave a review. If one of us feels really good, say it in there. If it's worth five stars, give it a five star review. This goes from my books, it goes for Dr. Gundry's books. The reason you do that is expressing gratitude makes you live longer and affects your gut bacteria in a positive way. Okay, I just made up that last bit, but it probably does.

Steven Gundry: I'm sure it does, actually. Yeah, it does.

Dave: I'm pretty sure gratitude does do, but the bottom line is leave reviews for Dr. Gundry if you like his book. It's a good hygiene as a consumer of media to let the people who make the media know if we did a good job for you, and the same goes for this show. Have a beautiful day.