# 53 Dr. Stephen Gundry

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**Ben:** Welcome back ladies and gentlemen. Muscle expert podcast, I’m your host Ben Pakulski and as always, we’re going out and find the world's foremost experts and today's no exception. This gentleman is changing the paradigm of the way people eat. And he’s been leading the way for a long time, literally creating new paradigms around what you should be eating for health and maybe even redefining the term health. Dr. Stephen Gundry the author of *The Plant Paradox.* If you guys aren't familiar with the book go out and get it now because it will change your thoughts about how to eat. Dr. Gundry welcome to the show.

**Dr. Gundry:** Thanks for having me.

**Ben:** I've welcomed many amazing guests and nobody has ever challenge the paradigm around eating ‘whole foods’. Everybody says, “You got to eat whole foods if you’re going to be healthy.” And I'm guilty just as anybody else. And I love the fact that you're going even deeper than that. Because so many people look at, “Well it comes from the earth, it must be healthy.” And I love that you’re challenging that.

So can you tell us about first of all, how this came to be. Just so you know my audience is typically men, we get some women, but typically men who are very interested in health. Muscle building is our focus, but muscle-building they realize is a process, rather than a necessary goal and these guys really just want to live their most optimal life and have optimal brain function and look and feel awesome. So, how did you discover the idea of lectins, tell us about them.

**Dr. Gundry:** Well you know Carl Sagan used to say that unless you challenge conventional wisdom, there will never progress, and he is absolutely right. In fact, I start one of my lectures with a quote from Natalie Merchant – many people remember her as a great artist. She wrote a song called W*onder* about very unusual child. But the line that I use is, ‘people see me as a challenge to their balance.’ If that’s all I ever do is challenge your balance, then I’ve done a good thing.

I got interested actually in lectins many years ago as an undergraduate of Yale University, where I had this crazy thesis back in the dark ages that you could take a grade 8, manipulate its food supply, manipulate its environment and arrive at a human being. And I actually successfully defended my thesis and got an honors, then I gave it to my parents and went to medical school.

So my challenge to my balance occurred back in 1999 when I was a professor and chairman of heart surgery at Lambo Lindi University, a very famous heart surgeon. And I met a guy who I called Big Ed, who had inoperable coronary artery disease. So all of his blood vessels were clogged up; you couldn’t withstand send them, you couldn’t do bypass surgery. And I’m one of these surgeons who would take anybody on (and there’s a few of us around the country).

And Big Ed was from Miami actually. He was 48 years old, and when I met him he weighed 265 pounds and it was not muscle. He had gone around looking for somebody to take him on, and he’d spent about six months going to various centers. But he’d gone on a diet, and he had actually lost about 45 pounds in six months. And he had gone to the health food store and bought a huge amount of supplements. So when I met him he had this big shopping bag full of supplements.

So I looked at his angiogram from Miami six months earlier and I said, “You know, I’m not going to help you. Everybody is right, there’s nothing we can do, everything is clogged up.” And he said, “Well look, I’ve been on this diet, I’ve taken these supplements. Maybe I did something in my heart.” And you know, I’m scratching my professor’s beard and said, “Well, good for you for losing weight, but that’s not going to do anything. And I know what you did with all those supplements, you made expensive urine,” which I firmly believed back then.

And he said, “Well come on! Let's get another angiogram.” And I said, “Okay.” So we got an angiogram and in six months’ time, this guy had cleaned out 50% of the blockages in his coronary arteries. Never seen anything like it! Now I was pretty stupid back then, I actually operated on him and did a five-vessel bypass. But if I’d known what I know now, I would have said, “Hey great job! Let’s keep going.”

But after we’re done, I said, “Tell me about this diet.” And he starts describing what he was doing. Then I said, “Wow, time out! This is exactly my thesis from Yale University back in the dark ages.”

And why it was so poignant was, I was 70 pounds overweight at that time. I was running 30 miles a week, I was doing 5Ks, 10Ks, half marathons on the weekend. I was going to the gym one hour every day and eating a healthy, low-fat vegetarian diet at Lomo Linda – which is an advenous vegetarian institution. And here I was with high blood pressure, high cholesterol, metabolic syndrome, had migraine headaches when I operated on babies, and I had such bad arthritis that I actually wore braces on my knees to run.

And I'm going, “You know, I’m doing everything right and why is all this happening to me?” And people I would consult with said, “Well this is your genetics. Your dad is the same way and you know, too bad!”

And then with that I said, “Let me look at those supplements.” And I'm a very famous for keeping the heart alive during heart surgery, we use supplements down the lab to keep hearts alive 48 hours sitting in a bucket of ice water. And I started looking at his supplements I said, “Wait a minute. I used that and I use that and I use that but I give them down the veins and arteries of a heart to protect the heart cell. And it never occurred to me to swallow the dumb things!”

So I called my folks and said, “Send out my thesis.” And I put myself on my thesis and I lost 50 pounds over a year and I've lost 40 pounds subsequently and kept it off for 16 years. And I started taking a bunch of supplements. And I started sending my blood work off to Berkeley, the University California in Berkeley. And within months, all of my issues went away – my migraines disappeared, my high blood pressure disappeared, my cholesterol, blah blah blah. I stopped wearing braces on my knees because my arthritis went away.

So I started teaching people in my practice at Loma Linda how to do this, and lo and behold their diabetes would go away and their hypertension would go away. So in a crazy day (my wife called it Black Friday), I looked in the mirror I said, “You know I can't operate on people anymore, I know how to get rid of their problems by teaching them how to eat!”

And so I resigned my position and set up an institute in Palm Springs, where I just asked people: if you want to play with me then every three months I want to get a bunch of blood from you, look at how your inflammation is going in your body, and we’ll get insurance and Medicare will pay for this. And then I want to see what happens as I take certain foods away from you, have you take certain supplements. And I didn't sell supplements, I'm an academic and so I want to find out what was going to happen in the experiment without me making money. I know that was dumb but that's what I did!

So that resulted in my first book which is called *Dr. Gundry’s Diet Evolution* which was published in 2008. And then a lot of people with autoimmune diseases started showing up on my door and they'd say, “What you know about autoimmune diseases?” And I’d say, “Absolutely nothing. But I am a transplant immunologist, I know how to fool the immunity system. So if you want to play, let's play!” And we built some very interesting test to tell when the immune system is turned on by substances such as lectin.

**Ben:** So can we talk about before you go on from there, exactly what you're finding and what you were looking for specifically when these people would come into your lab and say, “Hey, we are going to do your blood every three months.” What types of things were looking for and what were you finding?

**Dr. Gundry:** There were several labs that had developed some very sophisticated tests for what are called inflammatory cytokine. And they were able to do it on a…we used to do it in the lab, but they were able all commercial tests that you could actually get somebody to pay for. So basically inflammatory cytokines are how the immune system communicates that there’s basically an attack by a foreign invader. And our foreign invaders that our immune system looks for in general are bacteria and viruses. Obviously before the days of antibiotics, if you got a bacterial infection, you were screwed unless your immune system was ready to go.

But one of the things that early on we found was that, there were certain plant compounds called lectins that are able to actually make the immune system become activated. And the more I started to look into the plant defense system, the more impressed I was that plants, believe it or not, do not stand around waiting to be eaten. They actually have a life, they had it really good before animals arrived. And when animals arrived, they had a real problem because they couldn't move, they couldn’t run, they couldn’t hide, and they couldn’t fight. But plants have a huge advantage, they are chemists of incredible ability. They can turn sunlight in to matter and we haven’t figured out how to do that.

So what they do is they use chemical compounds such as lectins, and lectins are proteins. They are sometimes called sticky proteins because they like to stick to certain sugar molecules. And their targets are sugar molecules on the lining of our gut, they are sugar molecules in the lining between nerve endings, they’re sugar molecules in the lining of our joints just to use an example.

And the idea behind the plant defense system is that if you can make an animal sick, in pain, depressed or anxious or not be able to move – in the case of insects – then a smart animal will say, “You know every time I eat these plants or these plant babies, I’m not doing pretty good and I'm not reproducing. Well, I’m going to go eat something else.” And plant wins, the animal wins and everybody's happy. The problem for us as humans is, as most of know, we’re pretty stupid. And when we eat things that give us pain or don't really promote our wellness, then we keep eating! And we take a bunch of the Live or Adville or take anexium or Prilosec OTC or we take an antidepressant, and we assume that this is natural! And in fact, it's natural that were having these problems because we weren’t designed to eat these particular plants.

**Ben:** In reality, people just don’t pay attention to what they eat. They assume it’s in the grocery store, it must be good for me. So it is just mindlessness that is ultimately the problem, and if people started paying attention how they feel when they eat foods, there’d be a substantial increase in the number of people who didn't eat lectins.

**Dr. Gundry:** Let me give you a great example which is kind of a fun example: if you follow the blogosphere, number one, the book is very popular, thank you very much. Number two, there are some aggressive vegan authors who somehow think that I'm anti-plant, and nothing can be further from the truth!

**Ben:** At first sight that's what it sounds like, it’s you know, the ‘Plant Paradox.’ But People are ignorant and don’t want to read the book.

**Dr. Gundry**: Yeah. And a lot of the authors who have subscribed to the Blue Zone theory that there are certainly areas in the world where there’re long-lived people, and these authors describe their long-lividness to the fact that they eat grains and beans – whole grains and beans, and that this is the healthy way to long life.

Well having lived in a blue zone for half of my life (Loma Linda University), I can tell you that that little concept is absolutely wrong! And let me give you, the best example is the Okinawan. The Okinawans, very long-lived people in Japan. The Okinawans 80% of the calories that the old Okinawans ate was a purple sweet potato-80%. And a purple sweet potato if it’s cooked, has no lectins. It’s a tuber, it’s actually what we evolved to eat. The bean that they eat is primarily miso and a little bit of tofu. But it only constitute 6% of their diet. The other 6% that is measurable is white rice, not brown rice. And it's hilarious, the authors of *The Okinawa Diet* said, “Imagine how much healthier the Okinawans would be if they ate brown rice instead of white rice.” Boy are they stupid!

**Ben:** Right. Let’s fix them.

**Dr. Gundry:** And you go, “Wait a minute, wait a minute! You're studying some of the oldest living people in the world…”

**Ben:** And try to fix them.

**Dr. Gundry:** Yeah. It’s like how come they’re eating white rice? How come they're not eating brown rice? In fact, if you look at Asians in general, 4 billion people use rice as their staple. Yet 4 billion people eat white rice, not brown rice. May be they’re trying to tell us something that whole of the grain has some problems in it and in fact, that's where the whole is concentrated.

**Ben:** So I think a lot of my listeners would be angry with me if I didn’t get you to dive deep into the mechanism of lectins, and talking about these ‘sticky proteins’. Is it is similar like lipopolysaccharide situation, like similar to gluten. Or can you walk through the actual scent of the mechanism?

**Dr. Gundry:** So gluten happens to be a lectin. It's actually a fairly minor lectin in the scheme of things. So what lectins do, we’ll talk about the gut first. Lectins bind to a receptor on the entero site, and I hope your listeners know that gut is about the same surface area as a tennis court! And the lining of the gut is only one cell thick. And these entero sites, they’re all held together with what I call type junctions.

And to visualize this, most people play the kids game Red Rover, where we all locked arms. And the idea was the big kid was supposed to run across and break through the line. So our cells are held together with these type junctions. So lectins bind to the entero sites, and they flip a switch, and the switch makes a compound called Zonulin. Zonulin breaks the type junction. So now there's a gap. Now, lectins get through that gap but also you brought up lipopolysaccharides (LPSS). LPSS are the cell wall of bacteria, and we view the cell wall of bacteria as if it was a live bacteria. Our immune system can't tell the difference, it’s reading the barcode on the cell wall.

So when our gut is permeated by both lectins and LPSS, our immune system is basically the border patrol on the other side of our border. And about 65% of all of our white blood cells are bunched along the border of our gut for an obvious reason – because that is where folks get through. So lectins are viewed as what’s called a protein mimicker. They actually mimics other proteins in our body. It looks a lot like, for instance the myelin sheath, it looks a lot like the synovial membrane, it looks a lot like certain skin proteins.

So our immune system gets activated, and we can measure that activation with inflammatory cytokines. And our immune system basically goes to threat level V, we’re under attack, the invaders have crossed the border and we should scramble the fighter jets and we should go around the body and wherever we see lipopolysaccharides or wherever we see lectins, we should shoot to kill and ask questions later! It's called molecular mimicry. Lauren Cordein was one of the first to describe it, and I've described it as well and actually quantified it in my work. And I’ve actually presented papers where people of autoimmune disease, if we take lectins away from them, their autoimmune disease subsides, goes away. And we can watch their markers of autoimmune disease return normal.

And like I to talk about in the book, if we re-challenge people with certain lectins, we can actually then watch the immune system reactivate. We can watch the inflammatory cytokines reactivate. So this is not anecdotal, it's not telling stories, is actually based on bloodwork every three months in thousands of patients.

**Ben:** Brilliant. For the last 7-8 years, I've been teaching people about the benefits of eating a low inflammation diet and I didn't attach any particular types of foods, but particularly advocating a low inflammation diet. Can we talk about that? And obviously that’s a similar conversation, and what are the negative effects that people don't think about that inflammation is causing in their body?

**Dr. Gundry**: So inflammation is the root cause of everything that happens to anybody. Dale Berettason (probably the smartest guy in the world on dementia and Alzheimer’s) and I both agree that dementia is basically the brain protecting itself against perceived inflammation. And one of my patients that I talk about in the Plant Paradox is really illustrative of inflammation. So there's a guy who I called Tony in the book who had vitiligo. And most of your listeners probably know vitiligo is where you lose pigmentation, and Michael Jackson had vitiligo. No one knows the ‘real cause’, but it's thought to be an autoimmune disease, where our body attacks the pigment-forming cells called melanocytes. And melanocytes are actually modified nerves.

So Tony was one of my early adapters, and he came back to see me – this is well over 10 years ago – and he said, “I want to see this, my vitiligo,” he had vitiligo all over his hands and on his face. He said, “My vitiligo is gone!” He said, “What do you know about that?” Then I’m going like, “Wow! That’s really interesting. I know my diet is anti-inflammatory but that’s naïve to say that that inflammation was the cause of your vitiligo.”

What I wanted to know was, why was his body attacking his melanocytes? And so I said, “Now, Let’s see: melanocytes are nerve cells, plants made lectins originally to get rid of the original predator which was an insect. And it turns out that lectins are really good at mimicking some of the proteins on nerves in the myelin sheath, and the idea of a lectin to plant in an insect was to paralyze the insect.

So I started looking at all the things that I had asked people like Tony to take away. And I said, “You know, the commonality here is not that I'm having you eat anti-inflammatory foods, but it's the fluids I'm taking away from you.” So we started, interestingly enough I lost contact with him for several years and next time I saw him, his vitiligo was back! And I said, “Wow, what’s the deal?” And he says, “It’s really hard eat the way you want me to eat and the vitiligo is not so bad.”

And I said, “This is a great opportunity,” I said, “How about doing this again? You know, let's test the thesis.” And he said, “Yeah, okay. What the heck?”

There was a big meeting up at Harvard back in April on brain health and he happened to be chairing the session. And I ran into him and his vitiligo was gone. And I said, “Would you get up during the session and tell your story?” And he did, he said, “I’m telling you folks, I had vitiligo here, I had vitiligo here. Look, it’s gone, it’s all because I took lectins back out of my diet. And it was the lectins that was making my immune system, by mistake, attack these modified nerves cells in my skin that are called melanocytes, and when I took lectins out of my diet, my immune system relaxed, wasn't looking for particular proteins and my melanocytes came back.”

**Ben:** Other than something like vitiligo, what would be some of the other physical manifestations of inflammation or of lectin exposure? So obviously my demographic is concerned with aesthetics, brain function and living a long life and obviously digestion we both know is massive. But just give them something to kind of latch onto so they can get excited about eating this way, that they can relate to their diet.

**Dr. Gundry:** Let’s talk about brain health. I see tons of people with brain fog. And, one of the things that I've been very impressed with what lectins are capable of doing, is the nerves talk to each other by acetylcholine jump from one nerve to another. And in that little space there's actually a sugar molecule called sialic acid. And it just so happens that sialic acid is one of the favorite targets of lectin. And when lectins bind onto the sialic acid, you actually can't have nerves talk to each other. So that's number one.

But number two is a whole lot deeper dive than that. This is something that Dale Bretteson, who is the head of the Buck Institute, he is a professor at UCLA and he is the author of *The End of Alzheimer's*. Both of us think that dementia and Alzheimer's is actually because there are supporting cells of neurons of that are basically the bodyguards of neurons. And these are called glial cells or microglia. And these bodyguards actually nourish the neurons, they take care of them and they’re part of the immune system, which was the fairly recent discovered.

Now if these glial cells sense a threat, a threat from either LPSS or lectins, they actually, like bodyguards, they surround the neuron – which is a superstar if you will. And they try to protect the neuron from these invader. They do such a good job that the neuron essentially starves to death, and we’re beginning to realize more and more that it's this interaction between the glial cells and the neuron that are the cause of neuron death. They actually protect the neuron too well if you will.

And it's kind of like the neurons, the castle, and there’s an invading horde. You pull up the drawbridges to keep the horde out of the castle. But unless you get food into the castle, the inhabitants starve to death.

So this theory that dementia is actually because of trying to protect neurons from a perceived threat (inflammation) is really turning our heads around how dementia comes about. So if people want great brain health, you've got to get to the source of your great brain health and the source is actually your gut.

**Ben:** *Hey I interrupt this podcast to bring you something really exciting from the muscle intelligence community. That’s right, me! I want to send to you guys all over to my YouTube channel to check out all the new content coming out around exercise execution. Many of you don't realize how vital exercise execution is to your success. Whether you be attempting to lose fat or especially build muscle, make the most of your time. We are the best in the world at teaching you how to optimize every minute you’re in the gym. Nobody wants to waste time, nobody wants to leave the gym wondering if they’ve got the job done. Get in there, get it done in the shortest amount of time. Know without a shadow of a doubt that you’ve achieved the goal you set out to achieve, whether that be muscle building, fat loss or strength gain. We’re going to teach you how to do all that stuff in the simplest way possible using the most intelligence principles. Check out Muscle Intelligence on YouTube and enjoy the rest of the podcast.*

So would you say that lectins are actually more harmful than gluten? Because obviously everyone in the world right now is attached to this gluten-free diet. Lectins in general, two questions and you can kind of answer them side-by-side: are all lectins the same, and conversely is gluten a little less worrisome than lectins?

**Dr. Gundry:** Gluten, interestingly enough, if you look at people who have extreme gluten intolerant (celiac disease), the standard way of determining celiac disease is a biopsy. We actually do it with the immune markers, but biopsy is still the gold standard. You can take people with biopsy-proven celiac disease, put them on a gluten-free diet. 73% of them after two years will still have celiac disease by biopsy. That’s because most gluten-free foods that people are told to eat have lectins, which are actually worse than gluten.

And one of the things that’s been fascinating to me is we take those people with known celiac disease who’ve been on a gluten-free diet, and they clearly better, there is no doubt about it. But then we take the other major lectins away from them, and all of their immune markers and all of their celiac markers then go away. And it wasn’t until we took these other gluten-free foods away from them that it goes away.

There are lectins in all plants, and the old quote that *the dose makes the poison* is very, very true. And there's clearly some genetic propensity to lectin tolerance. If you have an interesting family history, for instance, if you had your tonsils removed or if you've had your appendix out, I can guarantee you, you are intolerant to major lectins. If you have a family history of autoimmune diseases, if there's hypothyroidism in the family, if there's a family history of irritable bowel, interestingly there's a family history of anxiety or depression, it’s probably lectins.

Now that sounds really crazy. But you can actually do animal studies where you take lectins and inject them into the bellies of rats, and the rat will actually develop such depression and anxiety that they will cower in the corner. They will not go out and explore their space. And you can repeat this over and over again, and if you think about it from a plant's standpoint, if your predator is cowering in a corner and not going out looking food, that's a really good defense strategy.

**Ben**: You win, that’s right!

**Dr. Gundry**: We just don't give plants their due. One of my real eye-opener is (and I really recommend it), most people may have heard of Michael Paulman. Michael Paulman's first book was called *The Botany of Desire*, and if you haven’t read it, read it. And it's actually all about how plants manipulate us. And you know, the longer I haven’t been studying plants since Yale University the more impressed I am with them. They’ve had 4 million years to figure all this out.

**Ben:** In other book that comes to mind speaking of that is, *The Hidden Life of Trees*. In the book, he brings up – I’m sure you know the book – he brings up the idea of plants being able to produce little neurotoxins. Is that kind of the level we’re talking about? Since you’re like, lectins are literally at that level of neurotoxins?

**Dr. Gundry:** Yeah, you know, plants their pharma PI is just so extensive to try and make, you know, either animals do their bidding or make animals go away is just – I don't know, I'm very impressed with them as you can tell. And as you know from *The Hidden Life of Trees*, trees will support a sick neighbor, they will actually send food and root supply system to a sick tree and, I mean, to think that that sort of community spirit exists in a forest is mind-boggling. We think we’re pretty unique creature, but in fact, we can dive deep into who actually controls us. But I got news for you: our bacteria, mold and fungus control us, not us.

**Ben:** Ironic you’re saying that. I’m actually headed out to the World of Microbiome Conference in Berlin next week, and it’s pretty excited to learn about that. The discoveries and advancements in the microbiome are fascinating, and I’ve read that you had really dived deep on understanding the microbiome for a long time. Any advice you want to give people? Because I know one of my listeners is sitting home right now saying, “What the hell can I eat? I can’t eat vegetables, meat some people think is bad for me, can’t eat dairy.”

What are the things that can help heal the digestive tract, can optimize a microbiome, and can allow people actually enjoy food. Because ultimately, it seems so restricted, right? Is it better to eat a very small amount of food in large amounts or can you still have the diversity that we need to actually flourish?

**Dr. Gundry:** Oh yeah, eat what you were designed to eat. You know, studying hunter gatherers like the Bushmen like the Hans, these people eat about 250 different plant species on a rotating basis. And all those plants have incredible polyphenols, phytochemicals that actually promote our bacterial population and promote good health. But, we’re designed to eat certain things: we’re designed to eat the leaves (we were actually tree-dwelling apes), and we’re designed to eat tubers. We have been eating tubers for about 150,000 years since fire was harnessed. And we’ve clearly been eating fish and shellfish and we’ve clearly been eating wild animals for a considerable period of time.

But what we haven't been designed to eat, no great ape has ever been observed eating grasses. You can't eat beans because uncooked beans are so toxic that we use them as some of our best poisons. Raisin is the lectin of the castor bean, and a couple molecules of raisin will kill you. Now, you can pressure cook vegetables, you can pressure cook beans and destroy lectins. In fact, pressure cooking is the only known way to destroy lectins. Lectins are heat intolerant…I mean intolerant. Just heat won’t kill lectins. Acid is really good for destroying lectins and there’s a paper out today that shows that people who take acid-reducing drugs like Nexium or Prilosec actually have huge increases of liver disease, non-alcoholic scato hepatitis, because their bacterial population is changed because the bacteria have been killed by acid and that lectins have not been killed by acid. And I talk about this in the book that if you want to have good health make sure Nexium or Prilosec never crosses your mouth.

So the other thing that we have never eaten up until 500 years is American plants. None of us are from America. Sorry, Donald Trump! We’re from Europe, we’re from Asia, we’re from Africa, and none of us were exposed to American lectin foods until 500 years ago. And some of our most beloved foods are high lectin-containing foods. The nightshades like potatoes, eggplant, tomatoes, peppers, Golgi berries are all American. Peanuts and cashew, these are actually American beans. Cashews are actually the poison Ivy family. And I can't tell you the number of people with either an autoimmune disease or digestive issue that cashews or peanuts are one of the big mischief makers.

So milk, it turns out that there's a protein in milk that most people react to and it’s called casein A1. And most of our American milk is the wrong breed of cow. Goats and sheep have casein A2, most cows in France, Italy and Switzerland are casein A2. Buffalo, mutsarelo, water buffalos are all casein A2. So milk per se is not the big problem, it's actually casein A1. And it's all in the book.

**Ben:** Is there something, some sort of a cross contamination (wrong word, but you’ll get what I'm saying), if people are developing this permeability in their gut from lectins and glutens, are they going to see some type of cross inflammation from things like dairy and another other foods? Because I know a lot of people are seeing some of these allergies are so prominent, I’m just curious what your belief is around that.

**Dr. Gundry:** Yeah, it’s interesting. I used to have such bad allergies, that I used to get allergy shots as a kid and actually through college. And in my practice, I see people that are so allergic to everything that even some of them can’t even go outside, and I detail at the book. And what happens with allergies is, once your gut is leaky, your immune system goes absolutely haywire and it doesn't want to make a mistake. So if it sees a foreign protein, it’ll shoot to kill even if in the past that protein didn’t cause anything.

For instance, 94% of us actually have an antibody to the peanut lectin. But most people up until a few years ago, never reacted to peanuts. And that’s because up until 50 years ago, most of us had an intact microbiome in our gut, most of us have an intact gut wall. And so our immune system, our microbiome if it’s in good shape, actually teaches our immune system that, “Immune system relax. You know, we’re a bunch of the kids down here, we’ve got things under control. Go have a donut and just chill out.”

But now, the bugs in our gut are totally deranged, the wall of our gut is being penetrated.

Just to your listeners: when you have an ache and pain, please don't take in Adliv or Advil. These are like swallowing hand grenades, they actually blow gaping holes in the wall of your gut, and this is actually from the Pharmaceutical Literature. So all this stuff is changed. So it’s amazing, I see people's allergies just go away when you finally heal their gut.

**Ben:** So what’s the difference now compared to a few years ago when people had intact gut walls. So is it the pharmaceuticals, you know, all that you?

**Dr. Gundry:** Yeah, I mean, it’s multifactorial. We’ve killed off our microbiome, we’re given antibiotics for any little sniffle, any little cold, any little cough, and most of these are viruses that aren’t affected by antibiotics. We didn't know that a broad spectrum antibiotic kills all of our bugs. In fact, there's good literature that shows that after a single course of antibiotics, your gut flora, it’s like a tropical rainforest and you threw a nap bomb on it and it burned to the ground. And you can take a bunch of probiotics and that's like planting new little seedlings, but if you really think you're going to get a tropical rainforest back in a few weeks, you know, I've got oceanfront property in Palm Springs to sell you! It just doesn't happen.

In fact, there’s one study that shows after two years of following individuals after antibiotics, they had a single bacterial species in their colons, where there should be 10,000 or more different species all interacting.

So antibiotics are in all of our food and even if it says antibiotic-free don't believe it. The FDA allows a veterinarian on a chicken farm. If one chicken looks ill, he's not going to dose that one chicken. He's going to does the entire flock. And it's perfectly legal to do that and not disclose that it happens. In fact, you probably saw on the news a few months ago that a natural poultry producer in the South, 67% of the poultry actually still had antibiotic remnants in them. So we’re eating those antibiotics in the food we eat.

And lastly, most of our grains have been treated with Roundup.

**Ben:** That was my next question, you read my mind.

**Dr. Gundry:** And this was originally designed to protect GMO crops. But what's happened to us is that industrial agriculture needs to harvest a field on a certain date, to have their harvesters on the field on a date. And that field should be ready for harvest that means it should be dead and dry. So we now routinely sprayed conventional crops: corn, wheat, soybeans with Roundup – and also canola – with Roundup to desiccate it, to dry it out so that it can be harvested.

Now, do you really think we would wash the Roundup off the corn or wheat, the soybeans, the canola? No, of course not. So these are then not only fed animals, but they go into our conventional food supply: into our corn chips, into our cereals, into our breads, and we then eat it.

Now, the Monsanto Company had promised that Roundup is harmless to us, but if we don't use what's called the shakamay pathway that kills plants. But it turns out the bacteria use the shakamay pathway and so Roundup decimates our bacteria population. But in addition to that, Roundup screws up with gluten. It actually makes gluten far more sensitive to people who aren’t gluten sensitive. It changes the molecule.

Lastly, Roundup screws up with our vitamin D metabolism in our liver. And one of the things that has been fascinating to me is that most people that I see with any sort of problem have a very low vitamin D level. And quite frankly, vitamin D level should be 70-100, and please if your doctor tells you your vitamin D level of 40 is too high and back off your vitamin D, don't do that. Vitamin D is essential to help us repair our gut. It actually stimulates stem cells in the crypts of our intestines to grow, and without vitamin D those stem cells don't grow and you don't repair your gut. And Roundup is now present in almost everything. In fact, Roundup is in American wines if you could believe it, and it's even in several organic American wines. And you probably just heard that, you know, Beyer bought Monsanto. And Beyer obviously is from the EU and there is now a motion in front of the EU to legalize Roundup. And I just hope this fails.

**Ben:** Completely agree with you. So what do we eat? What do you eat?

**Dr. Gundry:** So I eat a lot of leaves. I drink a lot of olive oil. People hear me joke that the only purpose of food is to get olive oil into your mouth. And I firmly believe that, you should try to get about a liter of olive oil a week into you and you do that by eating food. I’ll tell you what my wife and I had last night: we had large mixed green solid with several avocados in it with olive oil and the Greg's Apple cider vinegar dressing. And then we had a pasta soup with millet, and I poured about half cup of olive oil on my millet soup.

Now, why millet? It turns out there's two grains that aren’t technically grains, they’re whole-less. They are millet and sorghum, and they don't have lectins which is fascinating to me. And you could actually look at several great cultures that have good health, particularly in Africa, and millet and sorghum are their grains of choice. So don't be afraid of millet and sorghum, I make sorghum popcorn. You can actually find sorghum popcorn, it tastes exactly like popcorn but it's very tiny. And that we have recipes in the book.

**Ben:** That is exactly what I was going to say. Thank goodness you’ve provided pages and pages and pages of great low lectin and lectin-free recipes in your book *The Plant Paradox*, which again everyone should head out and get. I’ve also tried five or six of your products: porilo seed oil, citrus Portofino, lectin shield and olive leaf extract, all of which I think have massive value and you’ve gone to great lengths honestly to design those really, really well for this scenarios. So I'm just giving you a little shout out for those awesome products.

**Dr. Gundry:** Yeah, you know, I designed lectin shield. We know how lectins work and we know what their targets are, and you can actually have sugar molecules to attract lectins. And so you can't avoid lectins, but you can certainly minimize their effect. And so I designed lectin shield to minimize the effect of lectins. It's not a license to cheat like some of my patients think, but if I'm going out to a friend’s house or if I’m going out to dinner, I just pop a couple of lectin shield before I go. And I've have tested this on myself many times and on our focus groups and on our patients and they really did work.

**Ben:** Is there a reason why you chose porilo seed oil as an omega-3 source?

**Dr. Gundry:** Yeah. So porilo, most people don't know about porilo. It’s a popular oil, it’s actually the favorite oil of Korea and much of China. And I got fascinated in porilo because it actually has the highest concentration of alpha linoleic acid (which is an omega-3 fat), of any of the oils. But it has one really distinguishing feature, and it has Rosemarynic acid.

So Rosemarynic acid comes from Rosemary. And I began studying this culture in Southern Italy which is a small fishing village called Achioroly. And I've posted several YouTube videos about my visit there. Per capita they have most people over the age of 100 of any population in the world. About a third of the people of this villager are over 100. And their diet is fascinating, their diet is anchovies: they eat anchovies for breakfast, lunch and dinner. But every meal is cooked with Rosemary, and they sit around and chew Rosemary all day long. And they use huge amounts of olive oil, and they drink a lot of wine.

And one of the things that brought researchers’ attention early on is that, the men – this old a-hundred-year-old guys apparently or incredibly horny.

**Ben:** Sounds like a party!

**Dr. Gundry:** Yeah, it sounds like it. So your listeners, you know. So Rosemarynic acid, both Neil Braison and I will tell you, is one of the compounds that keeps nerves alive and well. And I think it's no surprise that the mentation of people who use porilo oil has been well documented. And the mentation of these people in Achioroly, Italy.

So I not only use porilo oil for its Rosemarynic acid, but just give a shameless plug, my omega-3 capsule has Rosemary extract in it along with the highest DHA per capsule that you can find. Right now it’s sold out but follow Gundry M.D., it will be back soon. It was too popular, sorry about that.

**Ben:** Thank you. We appreciated you doing such great work in researching all of this products and I’m sure my demographics are absolutely going to love this. So Dr. Gundry thank you so much for your time, I will definitely link to your website in the show notes. So if anyone wants to check that one out, it’s [www.BenPakulski.com/podcast](http://www.BenPakulski.com/podcast), and we’ll be getting this podcast very soon. Dr. Gundry, we’ll let you know.

**Dr. Gundry:** Great. I appreciate you having me.

**Ben:** Thank you so much sir, Have a wonderful day.

**Dr. Gundry:** Okay. Take care.

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*So doing some things before sleep to making sure that I wake up in the morning with an S on my chest, is massive. So I suggest each of you guys head out, pick up some Optison. And if you're really interested in being geeky about it and quantifying it, oral ring has also been so generous to offer us a discount which you can find at the show notes at* [*www.BenPakulski.com/podcast*](http://www.BenPakulski.com/podcast)*. Peace and love.*

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