

Yes, Paleo & Vegan Can Find Common Ground – Dr. Mark Hyman with Dave Asprey – #795

Announcer:

Bulletproof Radio, a state of high performance.

Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. Today, I'm inviting a dear friend and a guy that's really moved the needle for health and functional medicine and nutrition around the world, none other than Dr. Mark Hyman. He's been on the show several times and he's just a fantastic human, beyond what you'd know from just reading a book with him. I've spent a lot of quality time, he's taught me so many amazing things and he's got a new book called the Pegan Diet, which we're going to talk about today. I wanted him to talk about this because he's done more than a lot of people in bridging the gap between the angry vegans and the angry paleo-keto guys because we don't have to have anger when you figure out what to eat.

Dave:

He wrote a blogpost a while ago, I still remember it, saying, "What if we had this pegan diet?" because it turns out we all agree on more than we all think we do and he turned it into a book that is definitely worth reading. He cares so much about quality of food, about grass fed, about regenerative agriculture, all this stuff that's going to make the world a better place. Mark Hyman, welcome back to Bulletproof Radio.

Dr. Mark Hyman:

Thank you for having me, Dave. I'm so happy to be here. It's the best.

Dave:

Tell me about this pegan thing. What inspired enough to write a book?

Mark:

Well, I don't know if you were there. You might have been there. It was at Revitalize about eight or nine years ago. I was sitting on a panel with two friends. One was a militant vegan cardiologists and the other was a paleo doc, Frank Lipman and Joel Kahn and they were just fighting like cats and dogs. I was in the middle, ping-ponging back and forth. The tension was getting really high. I'm like, "Hey, if you're paleo and you're vegan, I must be pegan," and everybody cracked up. I thought it was a good job. Then I just thought about it on the way home on a plane. I said, "Wait a minute. They have way more in common with each other than with a traditional American diet. In fact, they're identical except for one thing which is where you get your protein, animals or grains and beans. That's it. They both don't want to have dairy. They both encourage Whole Foods, good fats. They both encourage lots of fruits and vegetables, nuts and seeds."

Dave:

They don't even like industrial animal raising even.

Mark:

Right.

Dave:

Mostly, that world is about grass-fed beef. It's like, "Yeah, we agree on almost everything."

Mark:

It's right. I was like, "Wait a minute," and so they started writing down the basic commonalities and their principles and just refining over the years. Then all of a sudden, the article was picked up in the USA Today and The Daily Telegraph in London, that there were people starting to make pegan bars, pegan shakes, pegan cookbooks. I'm like, "What's going on here?" I think, "Wait a minute. I better just sit back and create the big 10 view of what I really meant by this," which is that there are so many diet wars and people are so confused about what to eat. It's keto. It's low fat. It's low carb. It's vegan. It's paleo. It's raw food. It's carnivore. Every week, there's all these [crosstalk 00:03:12] ...

Dave:

There's all extremes, right?

Mark:

... and everybody's fighting with each other and we're fighting the wrong person. We should be fighting with the traditional American diet, we call the standard American diet or the SAD diet. That's really what's driving the chronic disease epidemic. Then, I began to look at, "How do we begin to be inclusive, to create a framework really understanding how we actually support a set of principles that can break through the nutritional confusion that can take down the science to digestible bits, that can include a lot of things that people are interested in like discussions around keto and longevity and hormone balancing and detoxification and regenerative agriculture and how to actually save the planet and save yourself to regenerate your health and the health of the planet and talk about what do we know about meat or what do we know about all these different foods that we're eating?"

Mark:

It's a very overarching framework that focus on really two main principles. One is food is medicine. Everything you eat, you need to think of as instructions or code that can upgrade or downgrade your biological software, that literally programs your genes, your hormones, your brain chemistry, your immune system, your microbiome with every single bite. Are you putting in good information or bad information? Are you putting in crap code or good code if you're a programmer? That's really important and I can drill down into understanding what is the quality in each area of our diet in vegetables, fruits, nuts, seeds, beans, grains, whole meat, dairy. What are the nuances of what you should be eating in each category if you're going to eat those foods? If you're going to eat dairy, well, damn, you shouldn't eat A1 casein. You shouldn't need industrial cows. You should be eating sheep or goat or you should be an A2 casein cows for example.

Mark:

Then the second principle is personalized nutrition or precision nutrition because listen, I'm a doctor. I don't just play one on TV.

Dave:

I play one on TV. I even do that.

Mark:

I've seen ... You're an Dr. Imposter. You're like an AMD, almost a doctor.

Dave:

I'll take that.

Mark:

I've been humbled and all the dogma has left my thinking because no two people will thrive in the same way based on the same diet. You might ideologically be a vegan, but it might be the worst thing for you or you might ideologically want to eat keto, but it might be the worst thing for you. On the other hand, you might thrive. It's important to understand what your body's doing. In the book, I have a whole section in The Pegan Diet on how to personalize nutrition, how to optimize your diet for you. One of the ways you can identify what your metabolic type is, what your nutritional levels are, whether your food sensitivities, which your microbiome is and how to optimize your diet for you. Because you can believe all the things you want, but ideology should not trump biology. Listen to your biology. Your body is the smartest doctor in the room. I think it's a really, really important framework.

Dave:

Telling yourself over and over that something is going to work when it's clearly not working is one of the biggest risks of any diet. I did when I was a raw vegan like, "Oh, I must not be raw enough. I'll double down when it stopped working," because it did work for a while. Then when you do the hardcore keto thing and it works great for six weeks and then your sleep goes away and you start losing hair, you're like, "It's because I'm not keto enough. I'm going to go down from 15 grams of carbs to 12 and then it's going to work." We have this idea that if something works a little bit, more and more and more is going to be better. What you're saying there is maybe it worked for a little while. Maybe it never worked, you just thought it was going to work. That's freeing for people to say, "Fine, what works for you."

Mark:

It is. It's important to understand that eating well for health, for longevity, for disease reversal is not that hard when you stick to a few simple principles. That's really why that subtitle of the book is 21 Practical Principles for Reclaiming Your Health in a Nutritionally Confusing World because we're all so fricking confused. Even I get confused from time to time. I'm like, "Wait a minute. What does the data say?" It goes into nuances. Some of the things I've learned as I was just researching this book, and I've been doing this for a long time, were really striking to me, and if I can maybe give a few examples of the ways in which food regulates your biology, but in a granular level and why, can I do that?

Dave:

Please, yeah.

Mark:

The first thing I want to talk about is the microbiome. Now, this is just a little snippet. This is just the tip of the iceberg in terms of what we know about the microbiome, but it turns out there's a particular bug that should be in your gut that's critical for your health to help regulate immune function, to prevent leaky gut, to regulate cancer risk, heart disease and metabolic health and protect the lining of the gut from intrusion of bacteria and toxins and basically food particles from getting into your bloodstream

through your leaky gut. This bug is called Akkermansia muciniphilia. Muciniphilic for the mucin layer or the mucous layer essentially that covers the lining of the gut. Now, then this particular bug, you can't take as a probiotic.

Mark:

If it's low, you're susceptible to all these problems. If it's low, what's really striking is based on the research, these new cancer drugs, they're called checkpoint inhibitors or immunotherapy drugs, they literally help your immune system fight the cancer. If you have stage four cancer, that's a death sentence for most people. With these new drugs, we literally can completely reverse it. Jimmy Carter had stage four melanoma, I think, and he completely reversed and he's still alive at, whatever, 90 million years old he is now. It's really striking to see that when you have low levels of this bacteria, these immunotherapy drugs don't work. [inaudible 00:09:01] life and death is feeding these bugs right.

Mark:

Guess what they love to eat? They eat, that's not prebiotics or probiotics, they love something called polyphenols which are these phytochemicals [crosstalk 00:09:13].

Dave:

Exactly.

Mark:

25,000 of these in plant compounds and the Rockefeller Foundation is funded \$200 million, I think, to create a periodic table to assess and investigate all these incredible phytochemicals and what they do. The particularly ones that Akkermansia likes are cranberries, pomegranate and green tea. Our friend, William Lee, mother had died for uterine cancer. She was not responding to any treatment. She was not responding to checkpoint inhibitors. He figured this out with her because he really loves this stuff, and for her low [inaudible 00:09:47] Akkermansia, he gave her pomegranate, green tea and cranberry, and lo and behold, boom, cancer cured in a month, 100% gone. That's the power of food is medicine.

Mark:

The second story I want to tell is one you're going to love and it's a new story on the horizon which is of an incredible new powerful superfood called Himalayan tartary buckwheat.

Dave:

Oh, yeah, we had Jeff Bland on the show, which [is talking about this 00:10:12].

Mark:

Great. You got [crosstalk 00:10:15] about this. I'll just share a snippet of it. Jeff is wonderful, but I feel like my job in life is the Jeff Bland translator. It's my job. Long story short, there's a part of your immune system that you write about in your book around aging that gets senescent. We call it immunosenescence. This aging of the immune system creates these things called zombie cells which are the result of mutated stem cells in your bone marrow that usually produce about a million white blood cells every single minute. If the cells are damaged, these white blood cells get in your bloodstream and they become zombie cells and they cause cancer, heart disease, autoimmune disease. They're really bad for you and they accelerate aging or immunosenescence.

Mark:

Well, what's really fascinating is that this Himalayan tartary buckwheat which is this forgotten plant that was grown in the most rigorous conditions in Tibet, in the Himalayas with poor soil and lack of water and high altitude and cold weather, this plant shouldn't grow anywhere, but as a result of living in such a stressed environment, the plant has created robust defenses to protect itself called phytochemicals and has more phytochemicals than almost any other food on the planet, like 137 different phytochemicals. Some are found nowhere else and these phytochemicals just happen to be the perfect antidote for the zombie cells. They literally nuke your zombie cells. You go from immunosenescence to immunorejuvenation which now with COVID is ever more important.

Mark:

This is the power of food is medicine. One regulates your microbiome, one regulates your immune system, one can regulate your detoxification system and so on and so forth, your hormones. The book is really designed to understand how food is medicine and works on these seven key systems in functional medicine that drive all disease and then how to use food to actually help optimize the function and performance of these systems. When you do that, disease goes away as a side effect. I never treat disease. I'm a doctor. I was trained to diagnose disease and treat it with medication or surgery or radiation.

Mark:

I almost never use medication now because, I'm not against it, I'll use it, I'm agnostic, I don't care if it's exercise or exorcism, I'll use it, but food works so much better most of the time. I feel like the book is the first attempt to really create a food is medicine framework for people to think about specifically what they're eating.

Dave:

What's new about this too Mark is we didn't realize that most drugs when we take them orally, it's what the gut bacteria do to the drug that turns on the drug. When you eat a food, it's what does the gut bacteria do to the food. Pomegranate, for example, I did a recent episode about a compound called urolithin A ...

Mark:

I love that stuff.

Dave:

... where 60% of people don't have gut bacteria that turn pomegranate stuff into urolithin A. If you don't have those pomegranate, you got a bunch of sugar, but if you have those and you can turn it to urolithin A, it's useful or now we can actually figure out the metabolite and you can take urolithin A directly. I do that now where I actually don't have the gut bacteria that can metabolize pomegranate into the magic stuff that makes it do good things for you.

Mark:

Well, that's another interesting example because it's another system. We talked about your microbiome, your immune system and other key system that you talked about a lot is mitochondria. A lot of your work is around how do you optimize mitochondria by getting rid of light pollution, by

different kinds of exercise, by various supplements because it's the key to healthy aging. Well, it turns out one of the key things that has to occur in the body is mitophagy which is the cleaning up and getting rid of old mitochondria, so you can have renewed vigor, energy and youth. Well, this particular plant compound from pomegranate that is converted to urolithin A with the right microbiome actually causes mitophagy. It literally helps to build muscle and clean up your mitochondria and promote healthy aging simply by eating the right polyphenol with the right microbiome to produce this molecule that then works on your mitochondria.

Mark:

This is an example of how food is medicine. The purpose of this pegan diet is to, "Let's get rid of all the dogmas and ideologies. Let's look at what does the science say about how do we optimize our health and how do we customize our diet for ourselves and not have some overarching ideology other than the simple principle that food is medicine and that we should personalize our approach in a way that regenerates our health and regenerates planetary health and improves our actual social fabric as well." There's a lot of wonderful ways that we can eat in a new way that does all those things. There's a whole chapter in there on becoming a regenetarian, which probably people don't know about but essentially-

Dave:

Talk about that some more. It's so important, Mark. I wished I had coined that word. I'm glad you did because it's probably the most important thing that we'll talk about. Define what that is.

Mark:

The way we actually grow food and the food we eat that's grown in the way it's grown degenerates our health which is why we have six out of 10 Americans with a chronic disease and 88% metabolically unhealthy. It degenerates ecological systems, environmental health and accelerates climate change. We should not be eating in a way that kills us and kills the planet, right? Everybody can agree theoretically with that idea. Nobody's going to be, "Yeah, I want more climate change. I want more ecological collapse. I want more chronic disease." Nobody's going to be for that, right? I'm figuring, "No one's against becoming a regenetarian. It's like apple pie and ice cream and motherhood, right? Nobody is going to be against-

Dave:

I don't know, those guys who are on the rolling coal might not be on your diet, Mark. You know that guys who modify their trucks to pollute more?

Mark:

But they, in principle, understand that there's a good thing to adhere by doing good things for humanity and the planet. The idea is that how do we even do it in a way that does that. What I learned about through my last book, Food Fix, was the power of regenerative agriculture, starting with the seed and the farm and the soil that produce more nutrient-dense food, it's better for you, that is actually more profit for the farmers, that conserves water, that eliminates the need for agrochemicals, that helps to mitigate climate change and drought and floods and makes the farmer 20 times as much money and at the same time draws carbon out of the atmosphere, puts it in the soil where it belongs.

Mark:

One-third of all the carbon today in the atmosphere from climate change, one-third comes from soil erosion, from the loss of organic matter in the soil as a result of over-tillage and the use of antibiotics on the soil. What I mean by antibiotics, glyphosate is a microbiome-destroying compound that's used on the soil on 70% of all crops. It's the most abundant agrochemical used around the world. It's like hundreds of millions of pounds of this stuff. Every billions of pounds, I think it's ridiculous the amount they use.

Dave:

Mark, if, I wasn't already taken, I think I'd want to marry you.

Mark:

I know. We have a bromance going on here.

Dave:

What you're saying, "Yeah, it's why I live on a small farm. It's why I'm building soil. It's why I eat what I grow," it makes such a difference. You can see where the animals poop, the plants are twice as tall and I put it on Instagram and telling them, "Look, do you see this line here, that's where the fence was. This is where the sheep poop. This is where there is no sheep poop." We want to fix the planet. Elon Musk is saying, "I'm going to spend \$100 million on carbon capture." I'm like, "It's called farming done right. That is the big carbon capture we can have and it makes you live longer and healthier and you eat the stuff that comes off that land."

Mark:

Exactly.

Dave:

There's no loser in this system except Big Ag and Monsanto.

Mark:

Right. It's true. There are some losers. What's really fascinating is looking at even ... This is not some leftwing opinion thing. The UN has come out and said, "If we take 2 million of the 5 million degraded hectares of land around the world that have been degraded through modern agriculture and we convert it to regenerative agriculture, incorporating animals in the ecosystem to build soil. It would cost \$300 billion," which is basically less than we spend for Medicare and diabetes every year. We spent \$3.7 trillion in America, direct and indirect costs for obesity and diabetes, \$3.7 trillion. We're talking about 300 million could convert to those million hectares of land into regenerative agriculture, would stop climate change for 20 years, give us more time to figure things out. It would produce better food, more food.

Mark:

The thing is people understand is like, "Well, if we could be all vegans to save the planet and then climate change." Factory farming is an abomination. It's bad for the animals. It's bad for humans who eat them. It's better for the planet, 100%. We should ban them. They should be no longer on the planet. We should get rid of every single one. I was just talking to my friend Kelly Brownell. He said there's 69 million chickens and 30 million hogs. North Carolina is one county and it's just so toxic and polluted.

Dave:

It's horrifying.

Mark:

But that does not mean that done in the right way, according to ecological principles, incorporating animals into an overall ecosystem on a farm is a bad thing. In fact, it's a necessary thing. Then you could literally stop climate change for 20 years, giving us a runway to figure things out. We really need to move in that direction. Under the Biden administration, they're now talking about creating an initiative on regenerative agriculture. I've been working with the administration and trying to get farmers and others involved in communicating these ideas. I think there's a real openness to it. What's interesting is when you do that, when you eat in a way that is choosing ... By the way, there's very few regenerative farms out there, so you really need to hunt, seriously gather for these places, but they're out there and their resource in the book, but the more people ask for it demanded, encourage it, more people shop at farmer's markets, go to their community to support agriculture, buy online from regenerative farmers like Belcampo or Mariposa Ranch and others.

Mark:

Gabe Brown, I forget the name of his regenerative product company, but he's got a great regenerative meat service as well. If you do that, you start to move the market, right? You start to move the market and you see what's happening with all these health brands. It's really driving the marketplace. That's why General Mills and Danone are literally funding millions of acres of regenerative farming in America which is really exciting to me. Maybe it's greenwashing, but I don't think so. I think they recognize that their supply chain is threatened by the way we grow food. They want to keep having the raw materials.

Dave:

Walmart did the same thing a while ago. They say, "We want more organic stuff," and like, "Oh wait, if we bought as much organic cotton as we want, we would buy more than is made in the world. Therefore, we have to change the world to make the stuff we want to buy."

Mark:

That's right.

Dave:

The power of big business to realize, we won't buy industrial animals that deplete the soil and we won't buy plants grown on depleted soil. They will have to, to stay in business, do what's right for the planet and what's right for us, which is make food that's worth eating.

Mark:

Absolutely. Walmart is the biggest organic grocer in America. People don't know that. One, it regenerates the health of the planet and the soil and the animal. It's all good on that, but what's even more interesting is the role of this type of farming in generating much more nutrient-dense food for us humans that has these phytochemicals, that literally can reverse disease and produce food, real food that's good for us and good for the planet. This is a win, win, win, win, win across the game. It's good for the farmers. We're squeezed between the banks and the agrochemical companies and the crop insurance and the government. It's good for the ecosystems that regenerate and bring that pollinator

species. It conserves water resources that are depleted around the world. It builds soil, which we're losing at incredibly accelerated rate. It's got a win, win, win.

Mark:

It generates products and food products that are more nutrient dense and more healthy. Gabe Brown and his farm, they've been testing their carrots and their vegetables, I think far more phytochemicals than the traditional farms. What's even more amazing, I literally just got an article in my inbox this week about how, and I have a chapter in here about it, is meat medicine basically. I know [crosstalk 00:22:27]. That's the title. I know it's going to be a little provocative. What's so fun about it is that I've been learning from guys like Fred Provenza who is a rangeland scientist, working with scientists at Duke University, actually analyzing the differences in phytonutrient content. I said this right, phytonutrient content in meat that's grown regeneratively.

Mark:

What that means is that if animals are foraging on wild plants or on lots of different varieties like 100 different varieties of various plants, each of which has its own phytonutrient content and composition, each of which has very unique vitamins or minerals or other compounds. The animals seek this out. The animals are smart. They know how to eat for nourishment. They know how to eat for health. They're literally eating their medicine and finding it and eating the drugs that they need on the farm, so they can stay healthy. As a consequence, these compounds get incorporated into their meat. When you eat them, you're getting the same thing. Some of these animals have these high phytochemical contents as the plants that they're eating if you would just eat the plants.

Dave:

It's really different. On my farm, our sheep walk around and we have a forest here. They eat whatever they want. They'll eat a little bit of rosemary. I call it inner basting, but they'll eat a couple bites of pine which is antiparasitic, but they'll go in and they'll muzzle it. If instead you take animals in a compressed air and you pour a bunch of mixed up food into a trough, they don't get to do that. The difference is that when we put the meat in a local market, someone will come in, they'll buy some of it.

Dave:

They'll come in the next day and they'll buy all of it because like, "That's the best meat I've ever had. I felt so good when I ate it." I'm actually opening a restaurant in the middle of pandemic in Victoria downstairs from my office in a little while. We're actually going to take the animals that we raise ourselves and use them in the restaurant because you get a food high when you eat an animal that ate what it was supposed to eat, was treated kindly throughout its entire life. It's not even in the same universe as an industrial steak from the store.

Mark:

Totally.

Dave:

Most people have never felt the difference.

Mark:

One of the studies I quoted in the book, in Australia, they did a study with kangaroo meat, which they have abundance out there and compared it to feedlot meat. Same amounts protein, profoundly different effects on the body. The feedlot meat causes inflammation. The kangaroo meat reduced inflammation. Wait a minute, how is that possible? Why? It's the inflammation in food. It's the instructions that are programming your biology. Quality is really important. In the book, I go through every bit of food we eat, what protein and fats and carbohydrates, vegetables, fruit, nuts, seeds, chicken, fish, meat, what you should be eating in each of these categories because a feedlot beef is very different than wild elk, right? A wild blueberry is different than a, I don't know, some horrible like starchy tomato that's grown in a hot house that has no nutrients in it. It tastes like carbo, right?

Dave:

In fact, you said blueberries, even those, if you're not comparing it to some random tomato, if you get the normal industrial blueberries from factory farms that grow blueberries and there are such things versus, I live in the Pacific Northwest, I buy a couple hundred pounds of blueberries at the height of the season from a local regenerative grower and they taste like blueberries. We freeze them and we hoard them because they're so good. If you go to the store and buy a little shrunken baggie of whatever, they don't taste like blueberries. They taste like something else.

Dave:

What we have here is it's legal and considered normal to say, "Well, if it looks like a tomato, it's a tomato," but just because the outer layer looks like a tomato, the inside is completely different based on how it was treated, but we don't have standards or way to tell. How would you suggest that listeners know whether they're eating the good stuff versus stuff that looks like the good stuff?

Mark:

Well, there are ways to ensure a little higher quality of nutrient density. One is source your food from the right vendors, farmer's markets, community support of agriculture, online resources for example regenerative foods. Thrive Market has incredible sources of regenerative meat and sustainably harvested or low toxin fish for example. There's Vital Choice Seafood that again sources their fish from really great Alaskan waters that are small fish. There are ways to get these things. It's a little bit more work and it's a little bit more detective work. Also eat weird food. I go to the farmer's market and I'm like, "What is that? I never seen that before. I'm going to eat some of that bitter melon," or, "What is that fruit?"

Mark:

I'm always trying to eat weird strange food because the more wild, the less commercially raised it is, the more weird it is, the better it is for you. I've got behind me a whole tray of fruit from [inaudible 00:27:11] stuff that I've never eaten before. I'm like, "What is that?" They're good.

Dave:

Jackfruit is gross. No matter how much you torture it, it still is not meat when you eat it. The information signal from jackfruit will never be meat.

Mark:

Jackfruit and there's breadfruit. I don't even know. There's all kinds of fruits-

Dave:

Breadfruit is awesome. That's [crosstalk 00:27:29].

Mark:

I think we are really you know able to be a little more diligent when you go to the grocery store. Buy stuff that is a little more funky. Get mustard greens. Get dandelion greens. Things you don't normally would eat in seaweed. These are just ways of picking out things when you go to the grocery store that aren't these big commercial products. There are ways to do it. It's a little trickier, but you want color, you want variety, you want organic when if possible. Regenerative, you can get it. There's a new regenerative organic certification that Rodale and Patagonia are putting together. It's coming. It's coming. This is coming. There are more and more farms that are converting to regenerative agriculture. It's going to take time, but you literally can transform your diet by starting to widen out your palate, by exploring different foods.

Mark:

I got these bitter melon greens which are really wild from the farmer's market. You just don't see that stuff, right? I'll get these weird different mushrooms and things that are just kind of funny. I tend to try to include as many of those things as possible. Variety is key because like those cows that are foraging on 100 different plants, we need to forage on a wide variety of foods. The carnivore diet can help a lot of people with chronic disease because it eliminates stuff. It's not so much about the meat. It's about what else they're not eating, right? They're not eating-

Dave:

Thank you for saying that.

Mark:

They're not eating dairy. They're not eating gluten. They're not eating grains. They're not eating beans. They're not eating sugar. They're not having lectins. They're not having all these inflammatory foods in their diet and not taking out all the hormones, antibiotics and pesticides and all the weird crap. Hopefully they're eating grass-fed meats. Yes, but it may not be the meat and then long-term, it's going to be a problem.

Dave:

I'm with you.

Mark:

Long term, it's going to be a problem.

Dave:

I've said the same thing and what all foods have in them is they have energy. In the traditional American farm, agricultural lobby industry, energy is the only thing matters, it's calories as if that's somehow the most important thing, but we do have to have some energy from our food. Then it has the good stuff, the nutrients, the signaling phytochemicals, the polyphenols, the vitamins, minerals. Then it has stuff that's not good for you in it. Depending on how you prepare the food and how you grow the food and all that, it can have more of the bad stuff or less of the bad stuff. When you go carnivore, you remove all

the bad stuff plants are doing to people, whether they're bad plants or good plants, whatever else, but then you eventually find, "I can tolerate some plants really well, but that plants not compatible with me."

Dave:

That's been the core of what I've been doing on the Bulletproof side. It's like, "Look, find the foods that work for you. It's not the same for everyone."

Mark:

That's right.

Dave:

I think in The Pegan Diet, you've become really programmatic about it. It's fine, you might do so well on red bell peppers because they're full of anthocyanins. Me, they give me rheumatoid arthritis. I'm never going to ... It doesn't mean they're good or bad. It means they're compatible or not compatible.

Mark:

I love raw onions and I love raw garlic, but if I eat it, I feel like crap. I get a brain fog, a headache. I don't know what [crosstalk 00:30:31]. Some people have reactions. Cooked onions and garlic are fine. Sometimes, I'll go on the garlic and I just love raw garlic and I'll put in something, but if I have a little bit, it's okay. I think everybody needs to understand what is their particular biology. The ideology and dogma that we have is really usurped common sense and science. The take home should be, "Let your biology rule over your ideology. See what works for you. If you go vegan and you lose your period and you have no sex drive and your muscle mass goes down and you're tired all the time and you want to stay in all the time and hide, that's not good. If you're Rich Roll and you're running Ironman triathlons and you figured out how to do it, go for it. It might not work for everybody.

Dave:

It's okay. People get really angry like, "Oh, you have to eat the way I eat." I'm like, "Yeah, I would recommend people do eat the way I eat," which is, "Don't eat the stuff that makes you weak and then eating the stuff that makes you strong and eat enough calories at the right time. There, eat the way I eat. That's it." [crosstalk 00:31:32] The outcome is very different.

Mark:

It is and there's a little bit of homework that has to be done. I go through how do you personalize your diet in the book, but within that, there are foundational principles of how do you choose quality and then from the best information in every bit of food you eat and then how do you personalize it and how do you optimize all your functional systems because as a functional medicine doctor, I don't treat disease. The body is structured in a way that has nothing to do with the way medicine is organized right now. Medicine is organized in specialties. You've got your cardiologist, gastroenterologist, rheumatologist, your neurologist, your dermatologist. You got an ologist for every part of your body. Nobody talks to each other and people often have multiple things. They call them comorbidities which means you have multiple diseases which is absolutely nonsense because they're all connected.

Mark:

If you have migraines and rheumatoid arthritis and irritable bowel or reflux and you have rashes and headaches, it's not just a random bunch of bad luck that you've got all these things. They're connected underneath like common mechanisms of inflammation and dysbiosis and other factors. Functional medicine is about how do you optimize these systems. I never treat disease. I optimize these functional systems. It turns out the biggest influence on these seven dynamic functional systems that are your biological network, your ecosystem, the most important influence on these is food, for bad or good, right?

Dave:

Yup.

Mark:

Right? For example-

Dave:

What percentage is it, 80-90%?

Mark:

I think it's probably about upwards of 80%. There's a class of things that are not food related. I've had those. I'm good with diet, but I've had stuff that's taken me down.

Dave:

If you live in a toxic mole and automobile exhaust, it doesn't matter what you eat. You're probably not going to like it.

Mark:

Dave, you helped me when I almost died four years ago from mold toxicity in my house. This is after I've been to your movie about mold. I just collapsed. I can eat all the great food I want. It wasn't healthy. I had mercury poisoning. That's not going to get sorted out by eating better. Yes, you have to cut out the swordfish and all that and eat vegetables and upregulate your detox, but it's really about finding those things that are real triggers. Absent that like Lyme disease, tick infections, mold, mercury, environmental toxins, all that, yes. Parasites, gut stuff, yes. You have to need a little extra help, but for most of the problem that's facing America today, and by the way, Dave, we are in a real pickle. Why is COVID so prevalent in America? It's not just we-

Dave:

We a lot of omega-six plant-based fats and a lot of sugar and a lot of crap. That's my assumption. Do you agree or is there something else going on?

Mark:

Yes, I agree. I think what's happened is people don't understand is that America is one of the healthiest nations in the world. COVID kills you by inflammation and we are all pre-inflamed. 88% of Americans are metabolically unhealthy. That means they have some form of prediabetes, insulin resistance, poor health from their metabolism. When you have that, that's an inflammatory state. That's nine out of 10 Americans. Even people who are just a little overweight, a little bit of belly fat seem to have higher risk

of severe illness and death from COVID. It's not like you have to be 300 pounds. You could be just a little over or not even overweight but just more belly fat and I think we're in a situation where we haven't even talked about that in America.

Mark:

We're talking about vaccines and masking and social distancing. I'm like, "Wait a minute, there's a lot we can do aside from nutraceutical interventions like vitamin D and zinc and vitamin C, and quercetin and green tea and [inaudible 00:35:13] and a lot of things can really help, but the food is such a big, big, big, big thing. I think that we just are missing the boat here. America, if I were president, I would say, "Listen, America, get off your crappy diet. You're all getting the quarantine 15 or the COVID-19 pounds, [inaudible 00:35:31] 15. This is not the time to comfort eat, to drink, to not take care of your health because you're just a sitting duck. When COVID lands on a pre-inflamed person, it actually causes a super fire called a cytokine storm which is what kills us."

Dave:

Are you saying that throughout all of human history, diseases take out the weak first?

Mark:

Yes.

Dave:

It's such a radical thought. No one's ever thought of that before, but yeah, we've done things to ourselves to make ourselves weak and our ideology says that we haven't, but our biology says that we have, to use some of the words you've been using. Let's say that someone reads The Pegan Diet tomorrow and they start adding pomegranates and the Himalayan buckwheat and all the other good stuff in, how long does it take to turn the inflammation dial back down?

Mark:

Oh, my God, Dave, this is what's shocking. It's shocking to me. It takes decades often to get sick. It can take days to get better.

Dave:

Exactly. Next morning, your joints don't hurt. You're like, "What did I just do?" Well, you didn't eat the popcorn for dinner.

Mark:

There's one guy came in after doing the program that's very similar to pegan diet. He's like, "Dr. Hyman, it's about 10 days and all my joint pains are gone. Is that possible? I have rheumatoid arthritis." Another woman, after being in a psychiatric hospital for depression and multiple medications, her marriage and jobs are falling apart, she's like, "After three days of changing my diet, my depression has lifted for the first time my life." This is a woman who spent a lot of her life in psychiatric hospitals and on piles of pills. Another woman came to one of our shared medical appointments at Cleveland Clinic, who had type 2 diabetes, heart failure and hypertension. She had multiple stents. She had this and she had kidney failure and liver failure. It was a mess. She was on her way to a heart transplant and kidney transplant. Three days, three days, she was off her insulin. Three days.

Mark:

Three months was off everything. Kidneys reversed, liver reversed, heart failure reversed which never happens. This doesn't happen in traditional medicine. You manage this as a chronic disease. You don't sure or reverse. I have multiple patients with heart failure, but we've reversed using food as medicine and a few extra nutraceuticals, but this woman [inaudible 00:37:47] three days, she's off everything. She lost, I think, 43 pounds in three months. By a year, she lost 116 pounds from going through, she has a body mass index of 43 and she was on 66 on her way out and she's now back in the game.

Mark:

I think we don't understand the power. When I have people do the 10 days of just really clean eating, like a reboot or 10-day reset, 62% reduction in all symptoms from all diseases, migraines, irritable bowel, insomnia, depression, joint pain, reflux, whatever it is. You got it fixed. If there was a pill that could do that, it would be a trillion-dollar blockbuster, right? It would be a trillion-dollar blockbuster. I'm willing to use whatever it takes to help my patients. I don't care if it's exercise or exorcism, I'll use it. I'm not opposed to medication or drugs and I use them in the right way for the right person at the right time, the right dose for the right indication, but most of the time, I don't need them because food is way more powerful a drug than most pharmaceuticals because they work with the body rather than against it.

Mark:

They actually activate the body's own healing mechanisms like we talked about. The Akkermansia for your microbiome gets activated by certain foods or the Himalayan tartary buckwheat helps your zombie cells or the urolithin A in pomegranate that causes your mitochondria to rebuild and to build muscles. We have the intelligence. It's not just about treating disease, it's not just about not having symptoms, it's the opposite. The way you get to health is not by treating disease. The way you get to health is by creating health. That is the science of functional medicine. It's otherwise known as biohacking which you're already the grandfather of, but essentially functional medicine is biohacking and it's what-

Dave:

They're very closely related.

Mark:

Completely.

Dave:

There is a name for that. There's a medical side and then there's a lifestyle side as well, "Are you sleeping well?" That hasn't been the traditional purvey of anyone but a sleep doctor, but a good functional medicine doctor is going to say, "How do you sleep?" because it's the food affecting the sleep. It's the other conditions like that. I've seen just a flourishing of functional medicine in the last 10 years, Mark. I know you're a director of functional medicine at Cleveland Clinic. I spend a lot of time working with big well-trusted institutions bringing this out. Are you hopeful that functional medicine is actually taking off, that it has staying power or is this is going to be a long hard march?

Mark:

I think this is the future. Look, there's five trends that are transforming everything about healthcare which are emerging. I think this is going to be a huge disruption. One is this framework of systems biology. Systems biology is understanding the body as a network, as a biological system, as an ecosystem. It's often called network medicine, systems medicine, systems biology. It's functional medicine. It's what functional medicine is. Functional medicine is the clinical application of systems biology, is to understand how to work with your biological networks to create health. It disrupts all of our notions of disease, all of our notions of treatment and that's coming and it's here. We're at Cleveland Clinic. We're not going away. We're publishing data very often in our center, showing ... We actually get better results than traditional medicine.

Mark:

The second trend is the Omics Revolution which has allowed us to understand so much about our biology including genome, the microbiome, the transcriptome proteome, and so forth, the metabolome. The next trend is the quantified self-trend which is all the devices like the Oura Ring and other things that people are wearing to track their biology. Now, we're having continuous glucose monitors. This is getting more and more sophisticated [inaudible 00:41:25]. Contact lens with measuring your blood sugar continuously. That's going to be putting huge amounts of data about our biometrics into a database.

Mark:

Then the last two advances that are going to transform it is taking all this information from network biology, from the Omics Revolution. You're talking about millions, if not billions of data points, which any one doctor will never be able to understand or figure out. I've seen more data points and I've seen more information on more patients than anybody, I think, on the planet because of the nature of my practice. I've literally done 10,000 [inaudible 00:41:55] testing on thousands of thousands of patients over decades and decades. I have this really rare understanding of the network connection between everything.

Mark:

When you take all that information and you put it up into big data and then you analyze it with artificial intelligence, all of a sudden, you're beginning to see patterns that no one else has seen. For example, this pattern of Akkermansia and the microbiome and cancer and polyphenols or the urolithin A. These are all things that are going to be fed into this database. When that happens, there's no going back. Doctors will be important, but they will be given support through decision making for what they do and how they diagnose by actually getting the help of these powerful transformational things that are all coming down the pike.

Mark:

All the stuff that you're on, all this stuff that you're on the leading edge of, that you're talking about Dave all the time, this is on the periphery now. It's coming to the center, right? Listen, it took 50 years from the time this guy named Semmelweis said, "Hey, you know what? At all these women are dying of childbirth fever. I noticed that that the midwives wash their hands between patients and deliveries. The doctors don't. I just observed this phenomenon. For some reason, all the midwives' patients are living and all the doctors' patients are dying of childbirth fever." He said, "Maybe doctors should wash their hands." They thought, "Oh, my God, how could you even imply that we, as physicians, would ever cause any harm to our patients by what we're doing? That's ridiculous." They banished him and he died in

disgrace. It was 50 years before doctors started saying, "Hey, maybe we should wash our hands before surgery."

Dave:

It's so frustrating. There's so much to that. It's the logic that says, "That can't be, therefore, it isn't." It's like curiosity was removed in med school. It's that curiosity that has led to every major great breakthrough.

Mark:

Absolutely. Absolutely. I think we are just so behind in our thinking in medicine and that's unfortunate because the paradigm shifts are hard, right? The Earth is not flat. A lot of people still think it is, which is amazing. Evolution, this is still controversial, right? I think there was the Monkey Trial, the Scopes Trial back in the '20s, but people are still disbelieving the evolutionary theory of Darwin. The fact that the-

Dave:

It looks like Darwin probably was wrong because epigenetics kicked genetics ass. It seems like we change a lot more quickly than Darwin thought we did, but we do change rapidly based on our environment.

Mark:

Yes, but it's the same idea that our environment is-

Dave:

It's the same idea, is that we change and respond to environment. That we know.

Mark:

The fact that the Earth is not the center of the universe and the sun doesn't revolve around the Earth, people were put in jail for thinking that, right? It just takes so long for these paradigm shifts to happen. We're in that in medicine today, I have no doubt we'll get there, I do think that we are coming across a threshold of a crisis around chronic disease, the agricultural system and the food system that are coming to this perfect storm where we can't ignore it anymore. I think my job has been to try to draw those connections, to talk about this publicly, to interact with lawmakers and policymakers to just bring this into academic centers and try to move the needle forward. I'm just one guy and-

Dave:

He's pushing harder than anyone else I know on this and having a bigger impact. I'm really truly grateful [crosstalk 00:45:50] for doing that. For real, that's a genuine compliment.

Mark:

I have no illusions about what I'm doing, but I just [inaudible 00:45:58] like-

Dave:

I think that it's time for a new business model to emerge and maybe you and I should talk about this offline. For years, when I retire, I'm going to retire on the golf course. In the golf course ...

Mark:

You are?

Dave:

... you're covered in glyphosate and all this other crap. What people actually want in the future, I truly believe, is a regenerative farm surrounded by houses. If you own a house, you make your homeowners association payment to the farm, but you get the profits and the food back from the farm. The real luxury going forward is to live right next door to a thing that builds amazing food that makes you live longer. This is what, not just retirement, this is going to be the most sought-after place to live that there can be, so there will be many of these around the world coming up and those will be the places where the people have the longest or the healthiest live. It's going to happen.

Mark:

I agree. I agree. I'm here in Maui in a friends of mine. There's a whole crew that have all this land on the other side of the island where they have regenerative farms. My friend I've had for years there, she's growing 25 different kinds of bananas. We walk around her properties. It's like you're eating this, you're eating that, they're like the Suriname cherries and all these varieties of different plants that I've ever eaten before and all these different greens and all these different fruits and all these different ... It's just like the most wild scene of abundance and deliciousness. They eat 80% of the food from their land. I just never eat anything like it when I'm there.

Mark:

It's not for everybody. They're living off the grid. They get their own water. They have their own solar. It's a lot of hard work, but it's just so beautiful to see such abundance and regeneration. I think, in America, it's like we have food scarcity. Listen, 40-plus million Americans are food insecure including one in four kids. We're the richest nation in the world and we have so much food. We felt like a lack of food. We throw 40% of our food away. We grow more food than we need for 10 billion people on the planet, but somehow, we don't have equity and access and food swamps and food deserts. Imagine if we started to do what we did in World War II, where the government said, "Hey, everybody, you all got to pitch in and have your victory gardens," and 40% of food in World War II was produced by the average person in victory gardens in their backyard. It was an incredible thing to see.

Mark:

Then of course, in the '50s, that all ended and there was a deliberate effort to usurp the home farm and garden model and home cooking. It was a deliberate attempt by the food industry. There was a woman named Betty who is a home ecs teacher and she's part of the incredible movement to have extension workers to go around to all the new families and teach them how to grow gardens, how to cook food, how to take care of their families. It was a government program. This woman's name is Betty and the food industry invented Betty Crocker as a way of usurping that and creating convenience as a value in food, right? "You deserve a break today. Convenience is king."

Mark:

They started serving ... If you go to the Betty Crocker recipe book. My mother had one, we had this, "Put one can of Campbell's Cream of Mushroom Soup in casserole. Sprinkle one package of Ritz crackers on the top of your broccoli and cheese, Velveeta cheese, whatever." That's really what happened and I think we really have this tremendous ignorance of how we got to where we are where we then had the

TV dinners and the astronauts food. It just accelerated. Now, we've usurped the American home. People don't know how to cook. They don't know how to choose real food. The kitchens have been hijacked by the food industry and the and the idea of home garden is just not even a thing.

Mark:

My mother, when I was growing up in Toronto, because she lived in Europe for 11 years after the war, in Europe, she missed the whole fast food and the convenience and industrial food revolution in America. She was buying from all of the cheese maker and the butcher and the farmer and the fruit guy and this guy and the dairy guy, [inaudible 00:50:13] in Europe, and they're all artisanal and all local. She got home and she had a garden. We live in suburban Toronto and we would go in the backyard, we had fruit trees, we had pear and apple and plum trees and then we had gardens with zucchini and tomatoes and basil. I just go out there and eat from the garden and this is in a suburban backyard in Toronto. We have a little homestead there.

Dave:

It's doable.

Mark:

Doable.

Dave:

For people listening, if you want to start a business that's useful, there's a lot of people who don't have knowledge or time on how to have a garden that makes food in their backyard. It's one thing to say, "Yeah, I have a lawn service." Screw that noise. You have a regenerative backyard agriculture service and you go out and you actually tend to other people's gardens because now you're part of their grocery budget, not their lawn-clipping budget. It's that big of a deal. There will be 100,000 people doing this over the next 10 years because it's actually better to have food in your backyard. It tastes better, it works better and it's more sustainable.

Mark:

[crosstalk 00:51:09] big problem this summer. I planted all these fruit trees. I spent a lot of money planting the whole orchard in my backyard and I let all the all grass grow to wild flowers and to go back to field and all the bees came. It looks so fun. Then the fruit started having on these trees. It's incredible, peaches and hundreds of peaches on these trees. I'm so excited to get my peaches. This fricking bear came and ate all the fricking peaches and literally would sit at the bottom ... In the middle of the day, coming up, sit there like a king and just eat all the peaches. There were hundreds of peach pits everywhere, and finally, he took the whole tree down. Now I'm like [inaudible 00:51:45].

Dave:

It's one of those things where learning how to do it at scale is hard. We've spent the last seven years building our farm to the point we can feed our community, but it doesn't have to be that hard in your backyard. It can be a couple rows of stuff and it actually feels good and it doesn't take much time. I love it that you're bringing that out. It's part of the wisdom that's built into The Pegan Diet, in your book. Guys, if you want to understand Mark's talking about, this isn't just a diet book. This is a book that includes that regenerative thing. It's like, "Look, if you want a signal that's compatible to your biology, if

it comes from your backyard or your neighborhood or at least your state, it's probably more compatible with you than something that came from Chile." That's just how it works. It's a system.

Dave:

I found that there was wisdom in you, Mark. All your books have new stuff. I don't know how you keep the pace up with your 13 New York Times bestsellers and counting, but all of the books have new stuff in them. The amount of curiosity and innovation there is quite impressive.

Mark:

I have a rare disease. It's called logorrhea.

Dave:

You can't start writing.

Mark:

That's right. I use the abundance of words. It's a trouble because I wrote this book and it's supposed to be short. I literally had to cut half of it out and throw it in the garbage. I'm so upset. My publisher was like, "Oh, there's too many words." I almost wrote a book that was supposed to be 80,000 words and it was 160,000 words. At the time, my partner said, "Oh, that's great, you have two books." I'm like, "No, it doesn't work like that. I have to cut 80,000 words. I'm negotiating like 110."

Dave:

That does mean though that every word counts. As a fellow author, yeah, you write it big and you go, "Oh, is this one really that important?" You know that what's left is the good stuff. I think you hit the bar like you always do in your books. Mark, thank you for the work you're doing in the world. Thank you for The Pegan Diet, bringing a little bit of peace and sanity to these discussions were truly vegans and carnivores and paleo and all that, we have a 90% overlap in what we believe. There's militant people on both sides who are never going to get along. That's okay. There's militant people in all sorts of things, but the vast majority of us are like, "Could we eat more good plants and eat stuff that's good for the world?" and I think you nailed it.

Mark:

Thank you, man. I appreciate it.

Dave:

If you guys like today's episode, go read The Pegan Diet and just follow Mark Hyman if you're not. He is one of the greats and a guy who's done huge amounts over the years from all the different things that matter in functional medicine and just in life. He's one of the guys I respect and follow myself. Have a lovely day. If you like this episode, well definitely read the book and also leave a review, because if you don't leave a review for an author, it's like buying a cup of coffee and not tipping a barista. We look at those reviews. We count on them. Mark counts on them and so do I. Thanks for listening.