Diet Doctor Podcast

50th podcast episode anniversary

Dr. Bret Scher: Welcome back to the DietDoctor podcast, I'm your host Dr. Bret Scher. Today we're going to do something a little bit different. You see, we've hit a pretty big milestone. We've just hit our 50th podcast episode. And that's a reason to celebrate. So, in those 50 episodes we've had almost 4 million YouTube views and audio downloads.

And our team at Diet Doctor thought, 'Wow, what a wonderful opportunity to step back and reflect on those first 50 episodes.' And for that I have to say, thank you to you, our viewers and our listeners who made this possible and allowed us to reach 4 million downloads and views. I think that's remarkable.

You know, when I started doing this podcast about two years ago, I said, look, even if nobody tunes in and listens, I'm going to enjoy this immensely, because, let's be honest, it gives me the opportunity to sit down and meet with some incredible people and have some very engaging and interesting conversations that I've enjoyed. But of course is not just about me and I'm thrilled that there have been so many of you who have come along for the ride and hopefully enjoyed this podcast as much as I have.

And of course I also have to give thanks to the whole team at Diet Doctor who have made this wonderful product; the audio quality, the video quality makes it a pleasing experience to watch and listen to beyond just the information. So, that's been a wonderful ride and I'm thankful for this opportunity to stop and reflect. So, our goal at Diet Doctor is to empower people everywhere to make low-carb simple.

And again when we started this just about two years ago in August 2018 we thought this would be a wonderful medium to help us fulfill that goal of helping people make low-carb simple. But not just simple practical tips. As a cardiologist, as a lipidologist, I love the science, I really do enjoy the science of nutrition and the science of health, but also as a clinician I know it's important to bridge the gap between the science and the practical information. And that's really what I set out to do.

To try and collect some of the greatest minds in the low-carb world and help to solidify the science, clarify the science and translate it to what people can do for practical implications to improve their health. So I hope we've done a good job of that and it's something I definitely want to improve on moving forward.

But in addition we think I always like to say we have to make sure the strength of our recommendation is matched by the strength of the evidence. And that's something hopefully I've tried

to make clear through this podcast and again something I want to work on more moving forward, because we don't want to just keep repeating folklore, keep repeating things that had been passed down. I think that's how our medicine got into a quite a bit of trouble and kind of steered the wrong direction.

So, I don't want to fall into the same trap when it comes to low-carb, when it comes to nutritional theories and beliefs. So, I want to keep questioning all our beliefs and portraying that in the most honest and open manner that I can. And that kind of leads me to what are my thoughts moving forward... to the next 50 episodes.

So, in addition to keeping these goals going I also want to start to branch out and start to reach more people not just in the low-carb world, but people who maybe don't know about low-carb or are openly skeptical about low-carb. I'd love to have a medium that reaches them and helps educate them and bring them in to learn more. That's why I love that at Diet Doctor we have our continuing medical education program to reach doctors and nutritionists and nurses and we are developing a coaching program.

This podcast can help further that goal of reaching more people to educate them about low-carb. And that's where I'm going to depend on you, our listeners for comments and likes and shares and to keep this conversation going so we can reach more people to help more people transform their lives. And that's what this is really about. Those are lofty goals but I think together with the team at Diet Doctor and together with you, our viewers and listeners, is something we can definitely achieve.

So now, let's get to the meat of this, let's get to the meat of this episode. We're going to recap our top five most popular episodes and then five of some of my favorite moments. So, start off with number one, our most popular episode, with over half a million views and downloads, episode number 23 with Dr. Jason Fung.

Dr. Fung has become a pioneer of intermittent fasting, time restricted eating, its impact on type 2 diabetes, insulin resistance, obesity and now even potentially cancer and longevity, really trying to further this concept of intermittent fasting as a wonderful intervention for health promotion. Now he's been out on the edge, promoting this, and he's gotten a lot of pushback because of it. But think of all the people whose lives he has impacted with his message and he really has a wonderful approach. It's "understatedly brilliance" as I like to say.

He tries to really make it very simple but still very sophisticated at the same time. So, there is no wonder why he is our most popular episode. So, here's a clip where he's talking about the role of insulin in cancer and longevity, which is a controversial topic.

But I think he does a wonderful job of making it understandable, I mean really creating some excitement for what's to come in terms of research and how intermittent fasting can help be a powerful tool.

Dr. Jason Fung: Looking at obesity for example, the World Health Organization lists 13 cancers as obesity related and including breast cancer and colorectal cancer, sort of the number two and number three cancers after lung.

Dr. Bret Scher: Which doesn't mean that obesity causes these cancers, but--

Dr. Jason Fung: Plays a role.

Dr. Bret Scher: Plays a role and makes it more likely. So, sort of if you have a genetic mutation and you're obese now the deck is really stacked against you.

Dr. Jason Fung: Exactly, but now there's something you can do about it. Because if you have a genetic mutation, there is nothing you can do about it. You have it, like I'm not going to change it; if you have it, you have it. I can't do anything about it. But I can change the environment in which that cancer cell lies. Because we know it's vitally important.

We take a Japanese woman in Japan and you move her to Hawaii and then San Francisco, the rate of breast cancer like triples even though the genetics are exactly the same. So what's the difference? The difference is clearly the diet. And the environment in which that breast cancer cell is living. So, again what is going to stimulate breast cancer cells to grow? And in the lab the answer is very clear. Insulin is what breast cancer cells need. You can't barely grow breast cancer cells in a dish without insulin.

If you take away the insulin they all like die. And if you give them lots of insulin, they grow. Because the nutrient sensing pathways are the same as a growth pathway. So, you take this breast cancer cell-- and remember the obesity didn't cause the cancer, right? But after that cancer cell is there, you're going to stimulate it to grow if you have a lot of insulin.

So type 2 diabetes, a disease of hyperinsulinemia - higher risk of cancer, obesity, disease of hyperinsulinemia - high risk of cancer. And then you say, okay, what about the other ones? What about AMPK for example... what blocks AMPK? Or what affects AMPK? Metformin. It's like, oh... Well, you know that metformin in a lot of studies has been associated with a significantly decrease rate of breast cancer. It's like is that the effect on AMPK?

A very interesting hypothesis. What about mTOR? It's like because those are the three main nutrient sensing pathways. Well, mTOR, you can block mTOR with rapamycin... and guess what? It is an anticancer medication, right? Why? Because you're blocking the pathways. So, rapamycin is super, super interesting because it blocks mTOR. So it's developed as an immune suppressing drug.

Dr. Bret Scher: Our second most popular episode is episode number 31 with Dr. Ken Berry. I love Ken, because he calls it like he sees it and we're all better off because of that. I mean, let's be honest, the medical institution as a whole over the past few decades really has started to confuse people and lead people down an incorrect path when it comes to the health of chronic diseases and Ken calls it. You know, he's going to call the medical community on this and point out where he thinks they've made mistakes and provide a path of what he sees as a way out of this to improve health.

And I think that's why his message resonates with so many people. His "no BS, call it like I see it" approach really resonates with people and it's no surprise that he's our second most popular episode. So, I especially like when he talks about his concept of the proper human diet, a term which I think he coined but is certainly becoming more and more popular and very fitting for low-carb diet, the "proper human diet". So, here's a clip of him and I discussing this.

So, when it comes to treating metabolic disease, when it comes to treating diabetes, in your 20 year career have you seen anything even remotely as effective as a low-carb diet?

Dr. Ken Berry: Nothing ever, nothing ever. If you could patent a pill that does everything that a low-carb diet does, you would be a trillionaire. But there is no medication, there is nothing ex-

cept-- And I've started calling it "the proper human diet". Because if I'm giving you a slow poison every day, you're going to be sick. I'm not going to kill you today or even tomorrow. You might not die for 25, 30 years, but I'm poisoning you a little bit each day.

You're going to have inflammation, you're going to have bad lab markers, you're not going to feel good, you're going to be irritable, you're going to get obese, too overweight, or too skinny... You are just not going to be healthy and vibrant and vigorous. And so then when I remove that slow poison from your diet and you get better, everybody is surprised by that. Really? Is that shocking?

And so I think what most low-carb diets do is they remove the slow poison of sugar, grains and industrial seed oils... that's the three big steps of any ancestrally appropriate diet. And people get better. And it's not because you've added something magical to their diet or to their medical regimen or to their supplement regimen. That has nothing to do with this.

What you've done is you just stop poisoning that mammal and then the mammal gets healthier when you stop poisoning it. And so I think when you feed a human being the proper human diet they get healthier and they get happier and they get more productive and they get more successful. It's almost like you give them a superpower when you start feeding them the diet that their DNA knows what to do with.

Dr. Bret Scher: That makes complete sense but you mentioned earlier when you hear that X, Y, and Z and everything gets better it sounds almost like a snake oil salesman. So, is there a population that doesn't thrive with this type of diet? Is there some bund that you've seen in your clinic that just doesn't work for some reason or you would caution against this? What's the downside if there is one?

Dr. Ken Berry: Yeah, I haven't found it yet. There is a very minuscule subpopulation that may not be able to eat a high-fat diet if they have some inborn errors of fatty acid metabolism, they may not be able to eat this diet. And I was doing research to do a YouTube video about this population, but literally in the US it's about 750 people, in the entire US, who cannot eat a high-fat diet because they just can't digest that much fat. Everybody else can do it. There is no patient population who shouldn't eat this way. At least I have yet to find them.

Dr. Bret Scher: Now our third most popular episode is Dr. Peter Attia. Now that was only my second episode as host of the Diet Doctor podcast. I admit, I was a little nervous for this one especially because Peter has such an amazing mind that thinks about longevity and health and nutrition in such a deeper and broader ways than most people ever could. So, I was a little nervous to make sure that we can do this justice in just an hour long interview.

I mean, trust me, I wish I had three hours to continue to pick his brain, but this was a wonderful tour of both him as an individual, as a physician, and sort of his thought process on approaching people when it comes to health and longevity. I especially appreciate this clip where we talk about the burning question people want to know, "Will I be healthier or live longer on a ketogenic diet?" And I appreciate Peter's approach to this question and his answer. So here it is.

When you're working with a patient and someone says, "Will I be healthier and live longer on a ketogenic diet?", how do you approach that? What is your thought process to help them figure out if that's the case?

Peter Attia: First is to acknowledge that I have no earthly clue if they will be healthier or live longer on a ketogenic diet. That's an unknowable... That's an answer to an unknowable-- That's an

unknowable question. So, I say look, let's stop thinking of these things as this is one type of diet, that's one type of diet... Let's just think of-- And this is an unsexy way to think about food, but let's just think of it as a bunch of biochemistry.

So, all you're basically eating is a bunch of carbon, oxygen, hydrogen, nitrogen, sulfur, a bunch of little cofactors but that's all we're doing. Is we just take organic matter, that organic matter goes through our system, we metabolize it, it has signaling cascades that come from it, it triggers enzymes, hormones, we assimilate some of it, we discard some of it. So let's de-religionize this thing.

Like I am on this diet versus that diet and that's my tribe that eats this diet. I think all of that stuff is sort of hyper dangerous and I will acknowledge that at some point in my life I probably contributed to that sort of bizarre mania. So, the real question is, you know, you have lots of things to consider within the realm of nutritional biochemistry and what you eat is part of it, but so is when you eat and when you don't eat.

And how you cycle that exposure to nutrient. So, when I think about going back to this strategy of longevity, one of the tenets of this strategy is that some cyclical exposure to nutrients appears necessary for longevity. So, if you constitutively down regulate nutrients which is called caloric restriction and you do that in perpetuity, there is some benefit from that, but it seems to be offset by some detriment.

So, that doesn't appear to actually be a longevity tactic at least for animals in the wild including humans given that we are in the wild.

Dr. Bret Scher: Our fourth most popular episode is episode number 28 with Amy Berger. Now, I've been fortunate enough to be following Amy for years since she wrote her book about Alzheimer's and actually had the opportunity to interview her for the low-carb cardiologist podcast a number of years ago. And this was a great chance to reconnect with her and interview her again.

She has sort of a no-nonsense practical approach to low-carb. It doesn't have to be difficult, in fact it can be quite easy and we don't have to get caught up in a lot other things that people promoted as things we have to do or everybody should do. None of that applies to every individual and Amy's message really resonates with people individually, because it doesn't have to be that complicated and I think that's why people love her message so much.

She continues to allow us to hold the mirror up so we can see our reflection, to realize we're all human beings, we're all going to struggle, we're all going to go through this, but we can go through it together and we can lean on each other and we can be just good human beings as we go through this process and we can help ourselves and help others while still being good human beings. I really appreciate that message from Amy.

So, here we discussed the role of replacement products and how that can sometimes lead to food addiction, so we have to be careful about the message of these products being safe and easy and necessary on a ketogenic diet. Again it comes down to the personalization. So, hear some of that approach comes through in this discussion.

Amy Berger: You know, I look at these keto cookbooks and they are delicious and we're so lucky to have these creative food bloggers, but I think some people can get into trouble with the keto muffins and keto brownies...

Dr. Bret Scher: Yeah, let's talk about that. I mean, there's so many keto products on the market now, keto cookies, trying to replace the things that we had "give up".

Amy Berger: Right.

Dr. Bret Scher: The fat bombs, and the bulletproof coffees, and the, you know, the keto desserts. And when someone gets started, that's what they're looking for. They want to replace all these things. And sometimes that seems like that's more dangerous than helpful and it sounds that you might agree with that in many situations.

Amy Berger: Yeah, I think for some people it's a really good bridge, it's a really good way to get you over the hump, you know, get yourself adjusted, but I also think in some people it perpetuates the desire for something sweet, even if it's fake sweet, or, you know, with sugar alcohols. And I'm not against these products. I think they really do have a place.

If having a keto cookie or a keto brownie is going to mean the difference between someone sticking to keto in general versus not, then have it, by all means, do it. But I also think, you know, something that we don't talk about enough in this community is food addiction and binge eating and really serious psychological and physical problems with food that people have.

And I think it doesn't really do you any good to replace a sugar binge addiction with an erythritol binge addiction or-- You know, for a lot of people going keto reverses that. They find the sugar cravings are gone, the desire to binge is gone, because keto just regulates appetite so well.

And there's been people who say, "For the first time in my life I'm not hungry. For the first time in my life I can go from one meal to the next without fantasizing about food or what my next meal is going to be. But that doesn't happen for everybody and I think these sorts of products feed into that for some people. Like I think, really you just have to know how you are wired, because some people can do fine with them and some cannot.

Dr. Bret Scher: Our fifth most popular episode, episode number 36 is with Dr. Eric Westman. Now, Dr. Westman is such an important pioneer in the world of low-carb movement. He's been doing this as a physician for decades and to be able to sit with him and just get a sample of some of his nuggets of wisdom and his experience was a wonderful opportunity.

And he's also a very unique individual because he's done the research, he understands the research, he has published the papers and he has seen thousands of patients. So, in my quest to sort of combine the science and the practical implications, it doesn't get much better than with Dr. Westman.

And so here in this clip he talks about his perspective on sort of the early keto studies and how we can sort of balance the concept of leaning on the literature but understanding the holes in the literature and combining that with the all-important clinical experience. So, here's this clip with Dr. Eric Westman.

To be fair, a lot of the low-carb versus low-fat studies, you know, the curves separate at six months that low-carb is better for weight loss and then at 12 months they sort of start to come together a little bit and then the compliance drops off even in the studies. So, one of the big concerns is it's not a long-term sustainable diet. How do you respond to those criticisms?

Dr. Eric Westman: As someone who provided several studies to the literature on this and I know a lot of the other authors of the other papers, most of them knew nothing about how to support

a patient in a trial. So, you don't want to look to the clinical research and publications, the old data anyway on how to help someone stay on it.

Because there was the blind leading the blind. I remember one investigator basically read the Atkins book and I said, "Well, did you go talk to Dr. Atkins?" He said, "No, I can't do that. I have to be impartial." I said, "Well, I actually talked to Dr. Atkins and what we did is... what he did is he kept the carbs down 20 g or less for the whole time."

He said, "Oh, that wasn't in the book." "I know, I went and talked to the doctor." So, the first round of studies you just got to realize that they weren't done by the people who know how to do it. And so I kind of look at the-- Again the only evidence what's in the literature... obviously not.

Dr. Bret Scher: Right.

Dr. Eric Westman: So, we can do better than those studies, if we pull out all the bells and whistles. Imagine if we could shame and guilt and... of course I never do that... but if we could, you know, instill the fear of eating carbs in someone like that fear of eating fat is instilled in someone, that would help with the long-term adherence. In fact, there's so many people that can't get to eat fat because they are so afraid of it.

Dr. Bret Scher: Right.

Dr. Eric Westman: So, I think the idea of you can stay on it is doctors wanting a reason to just think they know more and they read the papers and they couldn't do it themselves, so how could they envision someone else doing it? And so this is another reason why it's a grassroots ground up thing, because I know people who have done this for a long time... decades... like me.

Well, you know, you're not normal. No, in fact, I don't do a whole lot of obsessing about things. And I think it becomes easier and easier now that the environment has become more supportive. Just in the last year in our area you can get riced cauliflower. The big stores are selling it.

And cheese crisps and all the stuff we used to have to teach people how to do. So there's definitely a change that helps with the long-term ability of people to stay on it. But there's also a role for helping people through the sticking points.

Dr. Bret Scher: Well, those were five of the most popular episodes. So, now I wanted to pick some of my favorite moments from the podcast that sort of highlights what I've been trying to accomplish. Now there are so many, of course it's been a little difficult, but let's just get right into them. So, one was episode number 47 with Adele Hite.

Now, this interview is the perfect example of how we have to question our beliefs. And pretty much question everything. I mean, Adele, as we went over in the podcast, ever since she was a kid she's been questioning authority and questioning beliefs and it served her well, because she's such a welcome interaction with me. I'm fortunate enough, I get to work with her on a weekly basis if not a daily basis at Diet Doctor, because she's forced me to rethink a lot of what I believe.

And that's what we went over quite a bit in this podcast, whether it's the dietary guidelines, whether it's seed oil, whether it's eating more fat, you know, she really questions the myths of low-carb or the things that had been propagated down.

And look, because of that, because she questions things, she can be a little controversial and you may not agree 100% with everything she believes and what she says, but boy, she is good

at defending her position and she's good at making us kind of realize that we need to question ourselves more.

So, here's a clip where we hear her perspective on Ancel Keys and the politics of food policy and it's a little contrary to what we're used to hearing. So, this is a sample of how Adele Hite can kind of force us to kind of rethink things.

Adele Hite PhD: The dietary guidelines as we see them now were initially meant for a clinical population. So, the American Heart Association had some views about what type of diet was best for people who were at high risk for heart disease or had already been diagnosed with heart disease.

Dr. Bret Scher: But this is back in 1960s. You're talking about like back in the 60s.

Adele Hite PhD: Back in the 1960s, right. That what a high carbohydrate low-fat low-cholesterol diet. At the same time other physicians were using low carbohydrate higher fat diets to treat obesity and diabetes.

Those were already in circulation and being used. At the time, you know, Ancel Keys had already distanced himself from the idea that dietary cholesterol had anything to do with heart disease. So, the fact that we blame low-cholesterol diet on Ancel Keys is sort of silly, because he was not supporting that theory at all. But there were a number of people, Mark Hegsted and William Connor, who were.

Dr. Bret Scher: How did I get so misunderstood? Because Ancel Keys clearly did is Seven Country study and at that point was promoting the connection between dietary fat, dietary cholesterol and heart disease.

Adele Hite PhD: No, dietary fat, particularly saturated fat. But he did not think that obesity had anything to do with chronic disease. He did not think that dietary cholesterol had anything to do with it and of course he didn't think that dietary sugar levels had anything to do with heart disease.

Dr. Bret Scher: But saturated fat he did.

Adele Hite PhD: Saturated fat was the bad guy. But what McGovern's committee did was that they listened to all of the experts with all of these competing theories and they sort of mashed them together in a big pile and the biggest reason that the low-carb diet sort of didn't get represented in this has to do with politics, not with science.

Dr. Bret Scher: Another one of my favorite moments was my interview with Dr. Angela Poff in episode 44. Now, one of the reasons why I like this so much is what I've said earlier in the introduction, that I believe the strength of our recommendation and the strength of our language has to be backed by the strength of evidence.

And the way scientists should speak, the way scientists can speak and it's really exemplified by Dr. Poff... I mean she is so smart, so knowledgeable, knows the research inside and out, but isn't going to give you the flashy headlines that everybody wants to click on. Instead she's going to use a metered approach to say, look, this is what we know, this is what we don't know, this could be the potential implications and these are the things we have to be concerned about and this is where we can go further.

And listening to her speak is how I wish every scientist spoke. I think there would be a lot less confusion, a lot less grandiose thinking and comments, but really, bring it back to reality of what we know. And I really appreciate that about Dr. Poff and I really wish more people will learn from her example of her brilliance and the way she speaks and the way she relays herself. So, I think just by watching and listening to this clip you'll understand exactly what I mean about her approach and why I appreciate her so much.

To put things in perspective when people say a ketogenic diet or exogenous ketones may be helpful in cancer therapy, would you ever recommend them as a solitary cancer therapy?

Dr. Angela Poff: The data does not support that at all.

Dr. Bret Scher: I think that's important to clarify. So we really talk about an adjunctive therapy. **Dr. Angela Poff:** Integrative, absolutely. And it all depends on how important the specific mechanisms that you're targeting are for that tumor. Even with a ketogenic diet.

This is why I think that the ketogenic diet seems to, at least in the preclinical studies, where it's mostly been studied in cancer, seems to have an anticancer effect in a majority of the cancer types that it's been tested in, not all. That's important to know first of all. But it's influencing many, many things.

So, unlike a targeted cancer drug that may be influencing a specific genetic mutation, the ketogenic diet is changing hundreds of metabolic pathways at once. It's also influencing a large number of signaling pathways simultaneously through epigenetic alterations. So, I think that the ketogenic diet, because it's influencing so many things at once, that's why we see that at least the preclinical literature suggests it may be effective to some degree in a larger number of cancers.

Dr. Bret Scher: Along the same lines another one of my favorite moments was my interview with Dr. David Ludwig in episode number 12. Now, as a clinician and researcher at Harvard, he's in the highest echelon of both dealing with patients as a clinician and performing nutritional research.

But, let's be honest, nutritional research is called nutritional wars for a reason. It can get messy, it can get ugly, ad hominem attacks, people just really standing... Gripping to hold to their position and digging in and not trying to be open-minded.

Well, David Ludwig doesn't do any of that and that's what I love about him. He is a shining example of how researchers should behave, not only how they should talk, like Dr. Poff, which he also exemplifies, but how they should behave with one another.

And it's not personal, it's not a religion, it's not about whether you're right or wrong, it's about finding the answer that's going to help people. And you can really see that in Dr. Ludwig's approach.

He is a wonderful human being, a wonderful researcher and scientist and I really enjoyed this interview with him and I enjoyed every interaction with him because of the way he handles himself. So here's a clip of him describing the carbohydrate insulin model and again I think you can just see by his demeanor and his speech why I appreciate him so much.

Dr. David Ludwig: Well, first off, no single study is conclusive and definitive and we can talk about that in a moment. But let me provide the broader context. On the one hand obesity treatment has focused on so-called calorie balance, eat less/move more, doesn't matter how you do it.

And that is the primary focus both for public health as well as treatment in the clinic. So, an alternative paradigm which we've been developing along with others is called the carbohydrate insulin model. It focuses on carbohydrate and insulin, because you need a name for something. But it's not a single nutrient, single hormone hypothesis. It proposes that we've had it backwards. That overeating doesn't cause obesity over the long-term, that the process of getting fat causes us to overeat.

Now, it's a little hard for the mind to hold, but think about what happens in pregnancy. A woman typically eats a lot more, she's hungry, she has food cravings, she eats more and the fetus is growing. But which is coming first? Is the overeating causing the fetus to grow or is the growing fetus that's taking up extra calories triggering the mother to be hungry and eat more? You know, of course the latter, we understand it.

The same is true for an adolescent in a growth spurt. You and I no matter how much we eat aren't going to force our bodies to get any taller unfortunately. It's the process of getting taller in that adolescent in a growth spurt that's causing him or her to eat hundreds or sometimes thousands of calories more than would otherwise be the case. So that's obvious in those situations.

Why not consider the possibility that a rapidly growing fat mass that's been triggered to take in too many calories could be the cause of excessive hunger and the overeating that follows? That's the carbohydrate insulin model. We focus on carbohydrates because they've flooded our diet in the last 40 years during the low-fat years. Carbohydrates, especially the processed kinds, sugar, but just as much or perhaps even more so the refined starches.

Dr. Bret Scher: Another one of my favorite moments was episode number 14 with Dr. Robert Lustig. Now, if you're looking for fireworks, this is the one for you. But he is not all about fireworks, he's got the pedigree, he is an experienced clinician and an experienced researcher, he knows the science inside and out and he knows how to apply it to patients. But he also is very, very passionate about it.

Whether it comes to the dangers of sugar, or fructose, or the food industries that had been basically poisoning people for decades. He's very vocal about that and isn't going to back down. So, whether it was him calling out Dr. Neal Barnard and challenging him to a debate openly on the podcast or when we talked about the definition of metabolic syndrome, and his response was "garbage, garbage, garbage", because the definition of it doesn't do anything to address the underlying problem and he really wants to get to the underlying issue.

And so his stance on policy, his stance on research, his stance on clinical applications I think are so important for people to know and I love his fiery attitude about it. So, here's a clip that that exemplifies some of that.

And that comes back to your talks about metabolic syndrome, I believe that's what you are talking about here at this conference.

Dr. Robert Lustig: Yep.

Dr. Bret Scher: And we define... we have our definition of the metabolic syndrome, about the waist circumference--

Dr. Robert Lustig: Garbage.

Dr. Bret Scher: --hypertension--

Dr. Robert Lustig: Garbage.

Dr. Bret Scher: And you say--

Dr. Robert Lustig: Garbage.

Dr. Bret Scher: You don't mince your words.

Dr. Robert Lustig: Garbage.

Dr. Bret Scher: So tell me about that.

Dr. Robert Lustig: They are all manifestations of the metabolic dysfunction. They're all markers for the metabolic dysfunction, they're not the causes. Yes, they cluster together, no argument there. Different people have different ones, different races have different predilections to different diseases. The reason is because it's not one thing. It's three. And I will describe that this morning.

It can be from obesity, I'm not saying it can't, but I think that's actually one of the rare causes of metabolic syndrome, not one of the common ones. It can be from stress, because depressed people lose weight, but have metabolic syndrome and with visceral fat. And finally you can mainline it, you can basically fry your liver.

And you can do that at normal weight and have metabolic syndrome. So I think there are three ways to get there and I think there are different food stuffs that can end behaviors, that can contribute to them. And I think that there are ways to parse those three pathways in order to be able to help each person deal with the problem that has caused theirs. But if it's one-size-fits-all, it'll never work.

Dr. Bret Scher: I like that approach. And the definition doesn't define the disease, the definition is basically for billing purposes more than anything else.

Dr. Robert Lustig: That's right. So understand this is metabolic dysfunction and I'll even give it a better name. It's mitochondrial overload. Metabolic syndrome is mitochondrial overload in whatever tissue you're looking at. That is metabolic syndrome and we have the data to prove it.

Dr. Bret Scher: Very good. Now, another one of my favorite episodes, and this might be a little bit of a teaser, it's episode 51. So, it actually hasn't even launched yet, but it's coming next and this is with Dr. Frank Mitoehner. Now, climate change is such an important issue for our generation and the next generations to come, but whether or not it's important isn't the question. It's what can we do about it and how do we evaluate it.

And that has become so polarizing. And one of the main pushes unfortunately has been that livestock are the problem and we have to reduce our meat consumption to reduce our impact on climate change. But where does that become more propaganda and where does it deviate from true scientific principles?

Well, that's where Dr. Frank Mitloehner comes in, because he is an expert on this topic on greenhouse gases and livestock's contribution to it and industry's contribution to it. So, this episode, I really appreciate it, because he describes things with the detail and the nuance that we need to know. Again the flashy sound bites that become more propaganda are the ones that get propagated.

But Dr. Mitloehner's approach of, wait, let's take a step back and the way he discusses the difference between methane and carbon dioxide, the way he discusses about how livestock can actually be a potential solution of pulling carbon out of the atmosphere, putting things into perspective of their relative contributions and if we wanted to have an impact, where should we direct our attention to have the biggest impact for climate change.

These were some the things I really appreciated in my interview with Dr. Frank Mitloehner. So, here's a clip of him explaining how the message has been overly simplified to blame livestock and how we can see it in a broader picture.

There was a very scathing article recently in the New York Times, "The End Of Meat Is Here". So, there are a couple of quotes from that article. One is, "Animal agriculture is the leading cause of global warming." Another quote is, "We cannot protect our environment while continuing to eat meat regularly; this is not a refutable perspective." And then the third quote I want to read is, "Eating a plant-based diet is the most important contribution every individual can make to reduce global warming." Is any of that true?

Dr. Frank Mitloehner: Well, I have to say we all have our filters, we all have our biases and I have mine. So, I first have to say that. Now, this gentleman's vices are clear and have been documented over the years. He is a very active vegan and, you know, really an activist in this field. He is an excellent writer, I have to say, but a lot of the content he writes is just not based on facts, so the reason why I have a beef with it, I mean a real beef with it, is because he leads us on a dangerous path.

And why is that? Because he makes people believe that what we eat is the most important consideration when reducing a nation's carbon footprint. When indeed we're know very aware of what really drives our carbon footprint. We just went through a major lockdown. Half of the world was on lockdown, as you know. Half of the world's human population was on lockdown. And what happened?

Emissions went down in ways we have never seen before. All those cities like Beijing and Delhi and Tokyo and Los Angeles had crystal clear skies, blue skies everyday... blue skies. And then some of those economies went back to business like China and the air quality went right back to where it was. Air quality and greenhouse gases went right back to where they were. I have news for you, our cars didn't stop. Our cars, trucks, trains, planes, ships did.

So, people like the author of this article that you quoted put us on a wrong path on a dangerous path for solutions by telling people, all you need to do is change what you eat and it would save our climate. This is a dangerous message that is misleading the public to make choices that will not get us to our goal.

Dr. Bret Scher: Now, I have to admit it was a little painful for me to only pick five of my favorite moments. I could have picked 50 of my favorite moments from every single one, but then we'd be here for weeks, and nobody wants that, trust me. But two quick honorable mentions. One is Dr. Ron Krauss. I mean as lipidologist and cardiologist, I can talk lipids and cholesterol all day long.

So, my episode with Dr. Krauss maybe get a little technical for some people, but boy, did I sure enjoyed it. He is a preeminent researcher and thought leader in lipidology and sees things from a broader perspective, and that's what I really appreciate about Dr. Krauss in that episode. But my other honorable mention is sort of on the opposite end of the spectrum. That was with Todd

White.

And Todd is just such an amazing human being with his perspectives on business, on lifestyle, on meditation, on being a good person, on leading by example, and it was just so eye-opening for me to interact with him and see how he runs his company, how he-- It's not all about making money, it's about serving a purpose, creating your mission, creating an atmosphere and being a good person along the way.

So I really appreciated that approach from him and I also learned a lot about low-carb and wine. So, that's a win-win situation, no question. So, those were two honorable mentions I had to throw in there. So our five most popular, five particular moments I enjoyed and a couple of honorable mentions. So, it's been an amazing run, not even at two years yet, but already at 50 episodes and almost 4 million views and downloads.

So, thank you all for coming along on this ride and I really look forward to what's going to happen in the next 50 episodes. So, if you have suggestions on guests I could have on or ways to improve the podcast or change it, whenever you think, please let us know.

We certainly listen to everything and do whatever it is within our power to make this a better product for you, because that's our goal; to help you, our listeners, to reach more people, to educate people about health, about low-carb and about how to improve your lives. So thanks again, it's been a whirlwind, it's been a great journey and I really appreciate it. Take care of yourself, take care of others and have a great day.