



Episode 406: The Case for Keto: Rethinking Obesity and Weight Loss With Gary Taubes

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Katie: Hello and welcome to "The Wellness Mama Podcast." I'm Katie from wellnessmama.com and wellnesse.com. That's wellness with an E on the end. It's my new line of personal care products like our mineral-rich toothpaste that helps support your healthy oral microbiome, and our hair food, haircare shampoo, conditioner, and dry shampoo that nourish your scalp and your follicles for healthier hair over time.

I'm here today with an author who really changed the way I thought about health and nutrition years and years ago. Gary Taubes, he's the author of books, like "Why We Get Fat: And What To Do About It" and "Good Calories, Bad Calories." And now "The Case for Keto," which we delve into today, what the specifics of that look like. But he's an award-winning science and health journalist and author. And I really love how he really deep dives into the data and looks at what it's actually saying, doesn't get caught up in a lot of the kind of trendy health information that's out there. And he has for years been talking about these unprecedented epidemics we're seeing of chronic disease, obesity, and diabetes. And we go deep on this today, I think it's

especially timely, knowing that metabolic conditions put us at increased risk from any other kind of illness or chronic condition as well, especially, of course, timely this year, with everything else currently going on. And we really go into the specifics of that today and what the data actually says about how to reverse these conditions over the long-term, how to protect yourself now, and reduce your risk of complications and problems from them. So much, so much information in this episode, I think you'll learn a lot. I know I did. So, without further ado, let's jump in. Gary, welcome. Thank you so much for being here.

Gary: Well, thank you, Katie, for having me.

Katie: I'm so excited to chat with you. In fact, you were one of the authors I read very early on when I got into the health and wellness world. And your books, "Why We Get Fat" and "Good Calories, Bad Calories," really kind of were a paradigm-shifting for me and changed the way I thought about food and nutrition. And I think it changed the conversation of how many of us in this world think about food and nutrition. I also think that these are extremely timely topics that get more and more so with all of the things going on right now.

And you now have your new book, which is "The Case for Keto." And I wanna really go deep on this today, too, because I get so many questions related to this. And I think you might be the most qualified person I know to answer them. But to start off with, talk about why you decided to write this book? Because you have written extensively in the past, your books, I highly recommend all of them. But why did you feel this book was so important, especially right now?

Gary: Well, I think, when I see the discussion... Let me backtrack even a little further on. You know, I got into this 20 years ago, as a journalist with no preconceived opinions. And my conclusions in "Good Calories, Bad Calories," which was about seven years of work was that, you know, the nutrition, obesity, chronic disease research community, right, had made a lot of mistakes. It's when you talk about the sort of paradigm-shifting aspect of that book for which...Thank you for those words, by the way.

What I ended up concluding was that we had made a lot of mistakes and that there had to be a sort of huge fix for individuals to get healthy and for Americans to get healthy, and people around the world to kind of cure these metabolic disorders that have become so common. And as I've continued writing about that, the world has indeed shifted. So these arguments are more and more being taken seriously.

One of the points I make when I lecture on this now is, back in 2000, when I first started writing about them, there might have been a dozen physicians in America, who prescribe these low-carb, high-fat ketogenic diets to their obese and patients with obesity and type 2 diabetes, to try and fix this metabolic problem. And today, my estimate is there are probably a few tens of thousands worldwide. So this is a sort of small proportion of all physicians clearly, but it's a huge absolute increase in the number of doctors who have bought into this way of thinking.

But there's still a lot of misconceptions in the way the media discusses it, and the way a lot of physicians discuss it, and the way that people, in general, think about these problems. And I just thought what we need now is a book that can kind of put all this in context, put it in a historical context, put it in a scientific context, and kind of teach people how to think about these problems. And how to think about eating, if they're among the, you know, half of all Americans who struggle with their weight and struggle with their blood sugar.

So that was sort of the goal is to give advice. Originally, the title of the book was...what I wanted it to be called, was, "How to think about how to eat?" Because I just think that the nutrition and obesity communities have been so misguided over the years that they've embraced a whole host of ways about thinking. From the idea that you have to eat less and exercise more to control your weight, to a line I hear a lot "The diet that works is a diet that we can stick with." Without ever actually defining what happens...you know, what you would expect from a diet that works other than being able to adhere to it. So all these misconceptions I wanted to try and set straight as much as, you know, I can do it with the soapbox that I've got.

Katie: I love that. And I think there are so many important points in that. And I think this book is such a good follow up to your previous books as well. And right now, we're hearing so much about metabolic health and all these chronic conditions like obesity, and diabetes, because they are relevant to health outcomes. Of course, we're finding out when people get other types of illnesses, which this year especially has become very top of mind for a lot of people.

But I think to go back to some of the points you make in your earlier books for anyone not familiar, like you said, we're told that the obesity epidemic is because we're eating too much and we're not moving enough. And in fact, it seems like people who carry extra weight, it's viewed as a character flaw or a moral failing of some sort, some sort of lack of self-control. And you really explain this, I think, in the most clear and comprehensive way I've ever seen. But walk us through what is the real difference between lean people and obese people? Is it just self-control or what's really going on?

Gary: Okay, so this is one of the points I'm hammering on in this book. And I'm a little embarrassed I didn't hammer on enough in "Good Calories, Bad Calories." So the conventional thinking on obesity is that it is a disorder of energy balance. And we hear this all the time, calories in minus calories out. If you get fat, it's because you take in more energy than you expend. And the implication of this is that the difference between those of us who get fat and those of us who stay lean is simply how much we eat.

And you can see this again, in the history, the field going back to the 1930s, where... So as soon as researchers decided that obesity was, you know, caused by overeating, taking in more energy than we expend, they completely ignored all the physiological hormonal mechanisms that regulate how much fat we accumulate. So the point I'm making in this book is that, you know, our fat accumulates...I've done it in the past as well and I'm making it again stronger here, is that, for instance, if somebody gains 30 years between high school and middle age, 30 pounds between high school and middle age. So 30 pounds in 30 years, that means they're storing about 10 calories of fat in their fat tissue. Their friends who stay lean, 10 calories every day that their friends who stay lean are not storing.

So when people talk about what to do to fix obesity and they say you should eat 500 calories less or whatever, or you're getting fat because you're eating too much. What they're talking about is this very, very, very subtle day to day accumulation of calories in your fat tissue that isn't burned. And the way I describe in the book is, you know, every day if you eat, say 2,500 calories a day, which is actually a little less than average for the typical American, you're gonna store about 1,000 calories in fat in your fat tissue. So you eat this fat, it gets stored in your fat tissue. And then over the course of the day and the night, it comes back out of your fat tissue and is used for fuel, used to provide energy to your cells.

So for those of us who get fat, 1,000 calories every day goes into our fat tissue, and maybe only 990 or 980, come back out. And what we're trying to do is get the other 10 or 20 out. And you could try to do it by starving yourself, which is a conventional wisdom, or exercising for an hour a day, which is a conventional wisdom. Or you could study the...look at the hormones and enzymes and, again, these physiological mechanisms that regulate this process of fat going into your fat cells and fat coming out of your fat cells and you could fix that.

And so the argument is obesity, it's not an energy balance disorder, it's not about how much you eat and exercise, it's a hormonal disorder. And those of us who struggle with our weight, we've always kind of known this, or we should have known this. You know, if you have children who are overweight or obese, it's clear that they're not like their thin friends, but they eat too much. They're just fundamentally different from their thin friends. And the way they're fundamentally different is they tend to accumulate fat than people do not.

And so I'm trying to bring this conversation back to this understanding that fat people, people who become obese are profoundly different than people who remain lean. And it's not about how much they eat and exercise. It's about what their bodies try to do, wanna do with the food they do eat. Their bodies wanna store it as fat or their bodies want to, you know, burn it as energy. And that's a much different conception and it's one that the obesity research community has quite literally ignored for 90 years now.

Katie: Yeah, it's amazing to me that, like, some of these things have remained is the conventional wisdom, in spite of so much evidence and having it explained like this. Understanding those fundamental differences between someone who's lean and someone who carries more weight, what can we take from that that's practical? I know you talk a lot about this in "The Case for Keto," use that to our advantage to start to shift that and to get toward metabolic health for people who are struggling with excess weight.

Because...and to be vulnerable here that's something that was a struggle for me for many, many years, with Hashimoto's. And I had hormone components I had to figure out, as well as stress components which I think also really come into play. But how can we use, like, this information that we're finding to our advantage to help solve the problem?

Gary: And that's the key. What we've been taught, those of us who struggle with their weight are taught is we're supposed to know the mathematics of obesity. You know, if you overeat by 500 calories a day, that's a pound of fat a week. And if you wanna lose a pound of fat a week, you have to under-eat by 500 calories a day.

I've read many books. While I was writing this, I read memoirs by the people who had struggled with obesity. Tommy Tomlinson is a wonderful sportswriter wrote a book called "The Elephant In The Room," which is one of the great titles, discussing his struggle with obesity his whole life. Roxane Gay, a wonderful writer wrote a book called "Hunger" about her personal struggle with obesity. And they both say in almost the same words, "I had to learn the mathematics." And the mathematics was, you know, let's eat 500 calories a day less and I'll lose a pound a week. And then they had to learn that the mathematics didn't help them any.

And the argument that I'm making and now, you know, a few tens of thousands of physicians worldwide, is if you're struggling with obesity, you have to learn the hormones, you have to learn the endocrinology, which sounds complex and complicated because virtually every hormone in your body has some effect on fat accumulation. But the hormone that directly links your diet to your weight is insulin. And this is a hormone that we think of as being, you know, disrupted in diabetes.

Type 2 diabetics are known as being insulin resistant. Their bodies are resistant to the action of insulin, so they have to secrete more insulin to control their blood sugar. People who suffer from type 1 diabetes have an absence of insulin so they have to take insulin injections to control their blood sugar. But insulin also regulates fat accumulation that's just a fundamental part of its job. And when insulin is elevated, when we eat carbohydrate-rich foods that stimulates insulin secretion, the insulin goes up and our bodies store calories as fat.

So to understand the sort of hormonal regulation of fat accumulation basically means two things. First of all, you're storing fat when insulin is elevated. And to get fat out of your fat tissue, you have to minimize your insulin levels. This is something I also didn't write enough about in my earlier books because there's a level of complication I didn't think was necessary. But researchers who study fat metabolism, who study fat tissue, who are different, by the way, than researchers who think of themselves as studying obesity.

So the researchers who study fat metabolism talk about the fat tissue as being exquisitely sensitive to the hormone insulin. This is a phrase that comes up all the time, even in the research, exquisitely sensitive. So if there's a slightest bit of insulin in your circulation, your fat tissue will hold on to fat. It'll hold on to the calories that's stored and if you wanna fuel your body, you're gonna have to eat carbohydrates to keep your body running.

And this is why when you go on sort of low-calorie diets, but you don't cut carbohydrates, you end up being hungry all the time. Every couple of hours, you're snacking and eating because your body needs the carbohydrates for fuel. So, if you wanna get fat out of your fat tissue, you have to minimize insulin, that's sort

of the message. And that level of insulin, that's gonna be different for everybody. But the heavier we are and the longer we've been heavier, the lower your insulin has to be. And when your insulin is very low, that's when you're mobilizing fat from your fat tissue. And if you're mobilizing that fat and using it for fuel, your liver will be producing ketones out of it, and now you're in ketosis, and that's a keto diet.

So the ultimate argument is that for many of us, if we really want to be lean, the only way we can control our weight through diet is by minimizing insulin, and that's eating a ketogenic diet. Anything else will, for the most part, fail us, it'll either leave us too hungry or it won't have enough effect on our weight. And this isn't true of everyone, many people can just cut out some carbs or cut out sort of the most processed carbohydrates and control their weight. But for many of us who are overweight and obese, if we really wanna get lean, that's kind of the hormonal message.

Katie: Yeah, that makes complete sense. And that was definitely something I noticed as well, I had to do a lot of experimentation. Because it seems like there is very much individualization and personalization when it comes to what that specific amount of carbohydrates that's tolerated is, or what types, and some people seem to do well, with some variation in there. You mentioned the hormone side and what I found really interesting in my own journey of this, is that when I started really tracking, I found I actually had to eat more, but I had to be careful of where that came from, I needed more protein and fat.

But in all of my efforts to lose weight for so long, I've realized I was over-dieting, and I was under-eating, which was signaling a bunch of stress hormones in my body. And not getting enough things like protein and fat. And I know that you've talked about this but we have this almost epidemic of people being undernourished, but still overweight. So they're not getting the things their body needs even though they're actually eating enough calories. And I think that's such an important mindset shift for all of us to make is to not think of food in terms of just fuel as calories. But for fuel as feeding our hormones and the micronutrients that we need, and signaling the body, and building the body with all of the components that go into food.

Can you talk a little bit about that? About the component of being...how people can be undernourished and still overweight? And then also how there can be times when we need...for me, it was like I needed more protein, I was below the minimum I needed. So I was sending stress signals to my body even though I thought I was dieting and trying to lose weight.

Gary: And this is an area where individual variation really does play a role. So, yeah, it's one of the, sort of, defense mechanisms now of the nutrition community to this sort of low carb, high fat, ketogenic diet movement is that everybody is different. And it's also complicated and some people, you know, there's no way you can have a prescription for everyone. But again, one of the arguments I'm making in this book is that there are some facts that are universal.

So again, the idea that insulin controls fat accumulation, that's just textbook science that's...and it's true of all of us. But we're all...you know, our insulin response to the foods we eat will be different. And there you'll get

an individual variation on the amount of protein you need, or the amount of... One of the issues with protein is that about 60% of the...so protein is composed of amino acids. And these amino acids, about 60% of them will be converted to glucose or blood sugar when you eat, and then they will stimulate an insulin response.

So for some people, a sufficiently low insulin level will require just minimal amounts of protein basically so they'll have to get rid of the carbs in their diet. And by which I mean, you know, the sugars, starches, and grains, green leafy vegetables are always fine and they're a great source of all these other, you know, vitamins and micronutrients that we need.

But then what happened in this country, and this was something I documented in my first book was when we shifted when the heart disease research community decided on the basis of very ambiguous evidence that dietary fat was a cause of heart disease, and saturated fat was the cause of heart disease. And then in the 1980s, they shifted the whole country onto this low fat, high carb, high protein diet. And the carbohydrates we were consuming were particularly deleterious in the sense that they were more sugar which is, you know, empty calories, it's what it's called. But it's got the deleterious effects or toxic effects some people say because of the carbohydrates it's composed of, but also there's no vitamins at all in there.

The kind of carbs we were eating to replace the fat in our diet were things like potatoes, and pasta, and breakfast cereals, and breads, unless they're fortified with, you know, vitamins and minerals are pretty much absent to anything healthy. So yeah, you could eat these foods and have a deficiency of the necessary fats, and necessary vitamins, minerals, and think you're eating a healthy diet. And as you're getting heavier and heavier because of the effect of the carbohydrates, your response, what the public health authorities are telling you to do, and your doctors telling you to do, and your friends are telling you to do, and your parents are telling you to do is eat less, right?

So now, not only are you deficient in these necessary aspects of a healthy diet, now you're eating even less food, hoping that'll help control the weight. And so the result is sort of metabolic disasters. And we see it all over today with the, you know, again, obesity has exploded and type 2 diabetes rates have increased 700% in 60 years, which is...I mean, should be terrifying to people. So, you know, again, all of this can be fixed. It takes sacrifice to do it. There's no easy way out of this problem personally, or, you know, on a societal level, but it can be all be fixed.

Katie: Yeah, I agree. And I think things like this are so important as tools for each of us to have to start resolving that in each of our own lives with, like, all these factors that you've mentioned. And I'm really fond of saying, at the end of the day, we are each our own primary health care provider. And we should absolutely work with experts who are specialists in different areas, or who can be partners in that. But at the end of the day, our health care starts with what we put in our mouth each morning, and the sleep that we get at night, and all those lifestyle factors.

And so I love that you make this tangible and doable for all of us to be able to take control back of that and start seeing ways that we can improve this in our own lives. Because that's how the change happens for each of us and also societally is when we all take ownership there. I've read recently that 88% of Americans have some marker of metabolic dysfunction which means only 12% of Americans don't have a marker of metabolic dysfunction. And like you mentioned, we know things like obesity and diabetes are still on the rise. So I feel like this is more important than ever, and we've talked about keto.

But I also would love to...it may seem a little bit fundamental, but let's define what that actually means. Because I think there's also a lot of misinformation when it comes to keto. And we have the bacon and cheese version of keto. And then we have...I know people, vegetarian, wondering if they could still be keto. So when you talk about a ketogenic diet, can you explain what the factors and variables are that make it that?

Gary: Okay, well, let me...I'm gonna backtrack just one second to something you had said about your own sort of journey in this which is a very common one and very important. You had metabolic issues and you started doing your homework, going down the rabbit hole is a phrase I learned a lot. So one of the things I did for this book "The Case for Keto," I mentioned that there are a few...my estimate is a few tens of thousands of physicians worldwide who now buy into this way of thinking.

And I interviewed about 120 of them for this book around the world. And another 20 chiropractors and nutritionists, and dentists. And I wanted to understand their challenges and their experience, and why they embrace this dietary philosophy, and what the challenges were to their patients. And the interesting thing is they had all gone through the same experience you had.

So, about 1998, Malcolm Gladwell, the famous journalist, "Tipping Point," wrote a piece for "The New Yorker" called "The Pima Paradox" about obesity. And he kind of joked that every diet book had the same formula. And that formula was a physician that's struggling with his weight or some health issue and the conventional thinking doesn't solve it. And so they do their homework, they go to the library, or they bury themselves in their textbooks, and they learn that maybe there's another way to do it, and they try it and it works. And then they try it on their patients and it works. And now they're teaching this diet book from which they're gonna make a lot of money.

So Malcolm, when he discussed this, he referred to it as a conversion experience that is being described by the physician. And the truth is...or the reality, one of the things I realized writing this book is that the only way people ever come to the conclusions is if they've gone through a conversion experience like this. So if you're a lean physician, and your patients are lean and you're telling your patients they should eat a conventional healthy diet, which is, you know, fruits, vegetables, whole grains, lean meat, in moderation, nuts, legumes, you know. We hear it all the time, not too much as Michael Pollan says.

So you're lean and your patients are lean, and that's what you're telling them, there's nothing to fix. There's no experiments to be made, there's no observations to be made other than what the conventional wisdom

seems to work for you and for them. But if your patients are overweight, or diabetic, becoming more and more overweight and diabetic with each passing year, as is the case for anyone who practices internal medicine or family medicine in America today. And if you're gaining weight, and you know that you're doing what you're supposed to do, then the natural thing to do is to look for something else to start this process of experimentation.

And so you look around for other approaches. Now with the Internet, it's all too easy to find virtually everything. So a lot of the physicians I had interviewed, they'd all have gone through this, without exception, as have I, as have you. And they tried vegan diets, and they tried vegetarian diets, and they tried Mediterranean diets. A lot of them were athletes, some of them were world-class athletes who had gotten heavier and diabetic anyway. And it's only when they came upon this particular solution that they got healthy.

And this particular solution again, in the book, I call it...I use the phrase "Low carbohydrate, high fat/ketogenic diet," and I say it rolls off no tongs. But I think it's important because I'm not sure how important the ketogenic aspect of it is. And the great majority of the physicians I interviewed never checked ketones in their patients' blood. They never talked about ketones. What they wanted to do was get their patients off carbohydrate-rich foods, sugars, starches, grains. And get their calories from green vegetables and, you know, fat-rich, ideally, animal products, and we'll have to talk about that.

So animal products are, you know, meat, fish, fowl, mostly fat calories, some protein calories. We tend to talk about it, like in cooking shows, they'll talk about it as the protein part of the dish. But that protein part of the dish is typically mostly fat unless it's a skinless chicken breast. So when you do that, for most people, that will lower insulin a lot. And you will get significant weight loss. And when you lower insulin and lower blood sugar, you also...that significant weight loss goes along with a whole host of healthy changes to your metabolic states. Your blood pressure will come down, and your blood sugar comes down, and your lipid profile, your cholesterol, and your triglycerides will improve.

And so in effect, virtually everything gets better. You know, if what I and these physicians believe is correct, by removing the carbohydrates, you're removing the source of the metabolic disorder, and you're getting healthier. So you're not going on a diet and sort of fixing what ails you by removing the cause of it. And part of the implication also is you have to stay on that diet for life. If you ever return it, if you ever go back to eating carbs, you'll go back to getting fat or having your blood sugar get out of control, or your lipids, you know, increasing your risk of heart disease.

But the key is whether or not you're technically in ketosis...and I realize my book is called "The Case for Keto." But I'm not actually sure how important it is to have measurable ketones in your blood. What you wanna do is abstain from these carbohydrate-rich foods and replace those calories with sort of fat-rich foods. The exact kind of foods regrettably that we were all told not to eat for the past 40 years.

Katie: Yeah, that makes sense. And I love that you brought up the cholesterol and triglycerides idea because I think for far too long like you've talked about too, those things have been tied to animal products. And I think this is another really important conversation to have right now. Because we've seen this trend of a lot of people avoiding animal products and moving away from them, especially people who have heart concerns, or who are worried about their cholesterol and triglycerides.

And I know, just purely anecdotally, like I said, I now eat a very much real food-based diet that is most days, very low carb. But I do consume a lot of animal products and my cholesterol triglycerides have never been in healthier ranges, they're absolutely stellar. But let's talk about that a little bit more, like, is this a concern? What do you say to people who have worried about these types of foods because of that?

Gary: Well and this is even...when I talk to these physicians, and I asked them, what's the biggest challenge that your patients have to accept, the challenge is accepting that fat and saturated fat isn't gonna kill them. And so red meat isn't gonna kill them, and processed meat isn't gonna kill them, eggs and butter aren't gonna kill them.

This is what started me off on this research path. So in the late '90s, I did two investigative articles for the journal "Science." The first one was on actually salt and high blood pressure and it took me nine months to do. And the second one was on dietary fat and heart disease. And the reason I did the second one is because when I did the first one on salt, one of the worst scientists I'd ever interviewed in my life...and my obsession is good science and bad science, that's what I've been writing about for 15 years previously.

One of the worst scientists I ever interviewed took credit for getting Americans to go on this low-fat diet that we'd been all eating. So when I got off the phone with him, I called up my editor at "Science," I said, "When I'm done writing about salt, I'm gonna write about fat." Because that was one of the worst scientists I ever interviewed, just took credit for getting us to eat you know, this low-fat diet. And I don't know what the story is, but I can bet if he was involved, there's a good story there.

So I spent a year working on this fat story. And it turned out that our beliefs about the dangers of fat in the diet...and again, back then I had no bias, I had not written any nutrition books. You know, I hadn't told anyone how to eat except some friends who I suggested go on low-fat diets. From the 1960s to the 1980s, the researchers...well, first they generated this hypothesis of dietary fat and saturated fat caused heart disease by raising first was all cholesterol, total cholesterol, then it was LDL cholesterol, which became known as the bad cholesterol.

And they did a series of clinical trials to see if people got healthier on low-fat diets or on diets where you replace saturated fat from animal products, from like butter with polyunsaturated fats from seed oils or corn oil. And the studies failed to confirm the hypothesis. But what they did manage to demonstrate in a \$150 million clinical trial that went from the mid-'70s to 1984 was that if you put lower people's LDL cholesterol by drugs, they will live a week or two longer than if you don't.

And the research community had spent so much money on this trial, that when they got that result, they had to justify doing the study. So their justification was to say not only should we lower LDL cholesterol by drugs if necessary, but we should all lower it by diet regardless. Even though it wasn't even a diet study. And one of the problems is diets do a lot of things other than manipulate LDL cholesterol.

So for instance, when you eat, let's say we have two meals and one is full of...you're getting 500 calories from, you know, butter, and yogurt, a hamburger. And the other one you get those same 500 calories from the whole wheat bread and pasta. Eating that other one, the whole wheat bread pasta, your LDL cholesterol will be lower but your triglycerides will be higher which is bad for you. And your HDL cholesterol, the good cholesterol will be lower which is bad for you. And your insulin levels will be higher which is bad for you. And your blood sugar will be higher which is bad for you. And your waist circumference will be bigger which is bad for you.

But the community didn't care about any of that, all they cared about was LDL cholesterol because they had drugs, statins particularly, that could treat LDL cholesterol. So they put this whole country on this path where all we focus on in a healthy diet is the amount of calories in the LDL cholesterol. And when you eat an animal product rich diet for a significant portion of the population, I don't know what that is, it could be a third, say, their LDL cholesterol will go up, everything else will get better. Everything else, but their LDL cholesterol will go up.

And for that reason, and another story about the science of epidemiology that's probably too long and complicated for us to go through. The vegetarian movement in America, a group of, you know, individuals who have very strong ethical beliefs about the immorality of eating animals and raising animals for our livelihood, embrace that science, and used it to communicate this message. That the bad aspects of our diet is the animal foods in the diet, not the sugar, not the refined flour, not the pastas. Not all these other foods that individuals always knew would make them fatter until the 1960s, was conventional wisdom that carbohydrates were fattening. They shifted the conversation and made fat-rich animal products the problem.

And again, they did it with all the best of intentions, the ethical issues involved with eating animals are serious and not to be dismissed. But again, one of the arguments I'm making in this book is that some of us, if we want to be healthy, and if we want our children to be healthy, and by some of us, it could be two-thirds of the population, then what we wanna eat is a carbohydrate-restricted high-fat diet. And that can be done vegan, and it can be done vegetarian, but it's extremely difficult to do.

It's effortless when you're eating animal products because animals are fat and protein, they store a little bit of carbohydrates. We all like humans store a little bit of carbohydrates as glycogen. But maybe 5% of calories in an animal will come from carbohydrates, so it's effortless to eat, as our Paleolithic ancestors did. And when we do that, we tend to get healthy. So it's a conflict, and it's one that we have problems with because there's also a very serious discussion about the role of livestock, agriculture, and climate change, and one that we all have

to consider seriously. But again, for some of us, you know, if you wanna be healthy, these are pretty much the foods that we should eat. More importantly, if we want our children to be healthy, to grow up without this metabolic disruption of obesity and diabetes, animal products may be necessary.

Katie: Yeah, absolutely I think that very much needs to be the conversation as well.

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Another thing that often comes up from my audience, anytime there's a conversation about keto, is the idea or the resistance that women potentially need more carbs than men, or that this doesn't work in the same way for women because of hormonal considerations. So I'd love to address that a little bit. Is keto beneficial in the same way for women, and are there any special considerations that women need to know when it comes to following a keto diet?

Gary: Okay, so, anecdotally, I would say clearly there's a difference. So women, when you look at how hormones regulate fat accumulation. So insulin, drives fat accumulation, women, because of pregnancy, you

need to accumulate fat when you get pregnant so that you can nurse a child when the baby is born. And so women have...you know, the female sex hormones and male sex hormones also play major roles in fat accumulation. Not just whether you accumulate fat but where you accumulate fat. That's why men tend to accumulate fat above the waist and women tend to accumulate fat below the waist.

The fat accumulation below the waist is pretty much dominated by the female sex hormones, estrogen, particularly, and above the waist, it's dominated by insulin and testosterone in men. So these hormones tend to work to liberate fat from fat tissue, but they cycle. And then as you get older, and women as you secrete less and less estrogen, prior to menopause, and then through menopause, you'll accumulate fat independent of how much you're eating. It's just the estrogen is working to keep fat accumulation down. And then as you have less of it in your circulation, your body responds by accumulating more fat.

And it's fascinating because this was a well-known phenomenon in animals research. My research, I found it in, you know, books on hormones in the 1920s, written by experts that would talk about how if you remove the ovaries from a female animal, that animal will get fat. And, you know, it was clear this happened in ovariectomies in women as well. And yet these obesity researchers are insisting that if women gained weight during menopause or after menopause was because they were now sitting around playing bridge with their lady friends all day and eating bonbons. And I wish I was joking, by the way, but that's the kind of discussion you can find in the literature.

So, men don't have those issues. So when we lower insulin, there are no real counter-regulatory hormones working against this. And again, anecdotally, it's very easy for men to lose weight almost effortlessly. And one of the stories I heard from physicians who are treating patients and even some...I interviewed people who run obesity clinics particularly and they would say they'd have women come in and the women would, you know, wanna lose weight. And they prescribed this low carb, high fat ketogenic diet, and they'd go home and they'd start cooking this way. And the husband would go along with it just to humor the wife and the husband would lose 50 pounds, and the wife would lose 10. We probably damaged as many marriages as we helped with this kind of thinking.

The flip side is, there's probably no other way to do it except by diet, except by lowering. So there's no...unfortunately, there's no other shortcut that will work. And, again, when I talk to these physicians, even though they would tell me those kind of anecdotal stories, they would also say that they believed that it worked for women, at least it would make everyone healthy.

And the way I talk about it in the books is that the leanest you can be will be on the diet with the least carbohydrates. In general, there's always...again, we talked about individual variation, there's exceptions to everything. But for the most part, the leanest you could be is a diet without... And then the question is, do women have more trouble because they're, for whatever reason, culturally or evolutionarily less inclined to live on, you know, ribeyes all day long, if that's what it takes?

I mean, you tell most men in America, your diet is, you know, ribeye steaks, eggs, and bacon, they'll be relatively happy. They might miss their beer but other than that, it sounds great. At least, again, speaking, anecdotally, the women I know are not...can't go there or won't go there. My wife, by the way, is mostly vegetarian and we have these conversations all the time. In fact, we had to spend several tens of thousands of dollars building a deck outside so I could cook my meat outside, even in the midst of winter. Luckily, we live in California, so it's just raining. Because she couldn't take a house that smells of meat. So I do think it's more difficult.

On the other hand, these physicians said if people stick to it, they will get healthier. So, type 2 diabetes will effectively go into remission on these diets. It's one of the ways... This was phrased to me by a physician in Montreal, Evelyne Bourdua-Roy. She said when she talks to her patients and describes what she's gonna do, she says...you know, and these are mostly obese, and diabetic patients, mostly women. She says, "Look, I could put you on pills or I could teach you how to eat." And if she puts them on pills, the dosage is gonna have to be increased with each, you know, passing few years. And different pills are gonna have to be tried because diabetes, in particular, is a progressive chronic disease, it gets worse. But if we can change how you eat whether or not you lose...let's say you're 70 pounds overweight, whether or not you lose all 70 pounds or only 50 of them, only 30 of them, we could make you healthy in the process.

Katie: Yeah, so helpful to have those tools in your hands and not to get in that long term medication cycle when you don't have to. Another thing that's gotten more popular recently and I'm curious about your take on it is the ability for people without diabetes to be able to use a continuous glucose monitor, and actually gauge in real-time what their glucose response is, what their fasting glucose is. Which seems like at least somewhat valuable data when it comes to this equation about, you know, how your body's responding to different foods, how many carbohydrates can you handle that keep you in a healthy threshold. I'm curious if you encountered any of that research in your work on this book, or what your thoughts are on things like using, whether it be a regular glucose monitor or a continuous glucose monitor to have our individualized data to learn from?

Gary: Well, it's interesting. And first of all, I'm staring at a box, FreeStyle Libre, which is one of these continuous glucose monitors that I had picked up a couple of months ago. Because I wanted to wear it and see what happens to my own blood sugar over the course of the day. I haven't actually put it on yet. It is clearly changing how people...so I am working on my new book, and "The Case for Keto" is coming out December 29th but I'm working on my next book, which is about diabetes. So both type 2 diabetes and type 1 diabetes, and the history.

And in that world, particularly the continuous glucose monitors are changing the world. And these are devices, they're about the size of a silver dollar now. You can slap it on your arm, you wear it for two weeks, you could read your blood sugar every five minutes on your smartphone. It's the kind of technological advance that then will drive paradigm shifts, changing how people think. Because yeah, I mean, once you see what happens to your blood sugar with every food you eat, and if your goal is to maintain a stable blood sugar, particularly in type 1 diabetes where they lack insulin. What people find out is.....

It used to be that you would go and so you'd see your endocrinologist, say, four times a year and you take in a record from the kind of blood glucose monitor the old-fashioned kind. And so he could print out a record of your blood sugar for a couple of months and the patient with diabetes would sit down with him. And I heard this story a lot. The endocrinologist will say, "Well, what happened here?" And they'll point to some surge in blood sugar, "What did you eat here?" And they said, it was like, you know, going to see your teacher after you've just gotten...your guidance counselor after you've gotten C minuses on all your homework, and come away miserable.

And then now, you've got a device where every patient can see it for themselves. So, "Oh, I ate a banana and look what happened." "If I have a high protein meal for dinner, look what happens to my blood sugar five hours later or in the middle of the night while I'm sleeping." And so, now, this process of self-experimentation becomes almost immediate because you're getting immediate feedback.

And I think one of the shifts when you talked about the paradigm shifts you felt reading my books, one of them was just a shift of going from worrying about the dietary fat that you were eating and your LDL cholesterol, to thinking in terms of blood sugar and insulin. And the CGMs just immediately work as sort of behavioral modification devices as well as...because, you know, if you want to keep your blood sugar, if you care enough to keep your blood sugar under control, which means better metabolic health, which means lower heart disease risk, lower cancer risk, probably lower dementia risk. Then you're gonna find that the carb-rich foods are not your friends and fat-rich foods are and that will shift how we think.

Again, I don't know how much people are willing to make these sacrifices and how much some people actually care. You and I live in a world where we care and the people we know care. But we also live in a world where 15% or 17% of the population still smokes and every one of them must know that it's shortening their lives by doing it. So not everyone cares enough.

Katie: That's true. But I think, to your point, I think we're seeing much more, thanks to your work and others, like widespread knowledge about this. And I think we are seeing that shift start to happen. I think more people are willing to make the changes and stick with them. And like you pointed out, once you start making these adaptations, and your hormones start adjusting, it gets so much easier. Because you're not fighting that carbon sugar cycle in your body, and all the hormones that go with it. Which are literal hormones that were built for our survival, but very hard to battle with just willpower, when you're in that kind of vicious cycle.

So I think, like I said, works like this are so important, especially right now, knowing that obesity and diabetes and any kind of metabolic dysfunction increases the risk of complications from any other kind of illness or health problem. And so I think there couldn't be a more timely time to continue this conversation and to give people these tools. And I'm so grateful that you are doing that. Like I mentioned, you are one of my favorite authors in health and wellness and your works are so comprehensive and really have been paradigm-shifting for me. So I will make sure all of your books are linked in the show notes at wellnessmama.fm especially your new one "The Case for Keto."

And somewhat related question I love to ask at the end of interviews is if there is a book or a number of books, besides your own, that have had a dramatic impact on your life that you recommend, and if so, what they are and why?

Gary: Yeah, I saw...I was prepared to answer this. It's surprisingly difficult. So in terms of the book, if we're asking what book had the most influence on my life, I would have to say it was the "Phantom Tollbooth." Which is a book I probably read 20 times between the age of 7 and the age of 20. Every time we got sick as kids, you know, our mother would make us chicken soup and we read the "Phantom Tollbooth," and it's a book written by Norton Juster. And it's, you know, considered one of the great children's books ever. But what it did was it taught me...it made thinking about the world something that I simply wanted to do. Never to stop thinking about what you're doing, why you're doing, how you're doing it, what the different perspectives are. It also made life fun, it's a gas.

So that was the book that, if any, drove my learning experience. In the diet world, it's kind of interesting, because in the nutrition world, you know, when I did my research as a journalist, it was interviewing quite literally hundreds and hundreds of people and reading the papers. And there were really no books. Well, that's not true, there were books like Atkins "Diet Revolution," and "The Cholesterol Conspiracy," but these were books that we had been sort of indoctrinated to think of as crack array.

So somewhat I ended up having to do in my research was kind of fact-check those books to see if what they said was correct. So it didn't change the way I thought even though I ended up thinking, to some extent, like those books thought. So yeah, it's a kids' book, "Phantom Tollbooth," "The Phantom Tollbooth. "

Katie: That is a new one. I'll make sure that is linked in the show notes as well.

Gary: And you should also read it to your kids, the ones who are still young enough to be read to. It'll change your life.

Katie: I love it. Well, like I said, all the things we've talked about, I know you have so many resources, not just your books but you have all your various works online, I will link to all of those. You guys definitely go check Gary out, keep learning from him. So much, so much great information, and like I said multiple times, I think this is such a timely and important book right now. I highly encourage you guys to grab a copy. And, Gary, thank you for your time today. I know how busy you are and I'm honored that you took the time to be here today.

Gary: Well, thank you very much, Katie. Really, I love what you're doing and it's been a pleasure. I'm very grateful.

Katie: Thank you and thanks as always to all of you for listening, for sharing your most valuable asset, your time with us today. We're so grateful that you did. And I hope that you will join me again on the next episode of "The Wellness Mama Podcast."

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