



DR. B INTERVIEW The Gut Expert

By Chris Wark

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Publisher: Chris Beat Cancer Publishing

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DR. B INTERVIEW

The Gut Expert

Hey everybody. Welcome to another interview. I'm Chris, and I beat cancer. And today, I'm going to be talking with Dr. Will Bulsiewicz. Dr. Will Bulsiewicz is a board certified gastroenterologist in clinical practice in Charleston, South Carolina. He's an internationally recognized gut health expert. A trained epidemiologist. He's the author of more than 20 scientific papers and a new book called *Fiber Fueled: The plant-based gut health program for losing weight, restoring health, and optimizing your microbiome*.

Dr. Bulsiewicz is a graduate of Georgetown University School of Medicine. He trained in internal medicine at Northwestern Memorial Hospital and gastroenterology at the University of North Carolina hospitals. He also earned a master of science and clinical investigation from Northwestern University, and a certificate in nutrition from Cornell. So, he knows a couple of things. And I'm excited to share him with you and pass on some of the knowledge that he has acquired. And I'm always really interested to hear origin stories – how physicians become holistic and plant-based and have those light bulb epiphany moments in their life that changed the course of their career. And so, first of all, glad to have you

Dr. B: Chris, man. I can't tell you how excited I am to be on your show. I've been really looking forward to recording with you for a while. And to say that you beat cancer is like such an understatement. You destroyed it, man. You crushed that beast.

Chris: Thank you.

Dr. B: And I'm glad that this is a daily celebration for you. It should be. And I'm excited that we get to talk about gut health, which obviously is so relevant to health throughout our body. Our risk of cancer. But particularly, our risk of colon cancer. I feel like that's where the connection is really the most clear cut and strongest. So, there's a lot to talk about.

Chris: Right? Yes, there is. And man, it makes me feel so good, anytime a medical doctor says they like me, it's like the highest compliment for me. So, thank you. I appreciate that you appreciate what I'm trying to do. Trying to encourage people, and give them actionable, useful information that they can use to help heal or prevent most chronic disease. It's not just cancer. Right? But I'm really thankful. I mean, a gastroenterologist is the guy who found the tumor in my colon. And when I was 26... Most everybody watching knows my story, so I'm not going to retell it. But I was having abdominal pain. And I went to the doctor, they didn't know

what to do. Did an X-ray. Didn't see anything. Eventually, referred me to a gastroenterologist. And then, he did a colonoscopy and found the tumor there.

So, I am very thankful to that man for doing a colonoscopy on a 26 year old, which is weird. That's not routine. And so, anyway... But having said that, we had no conversation about nutrition. There was no conversation about diet or lifestyle. No conversation about the causes of colon cancer. I mean, I'm thankful that he found the tumor. But beyond that, yeah, he didn't tell me anything else that was useful to me. And what's really funny is, years later when I was working on my book, I was going back through my medical files and all the crap that I was sent home with and all this kind of stuff. And there was a little pamphlet in there that talked about the rates of colon cancer being very low in Africa and for people that eat high fiber diets or whatever. It was actually in this little pamphlet they sent me home with. But I didn't even read the pamphlet, and no one brought it up and whatever. But they knew. This was information that they knew. It was in their office. And I was never told. We'll get into all that. I can't wait to hear you dig into it. But before we do, how did you even get into this world?

Dr. B: Well, let me ask you a quick question because I'm very curious...before I jump into my story. So, you grew up in Memphis?

Chris: Right.

Dr. B: What was your diet like when you were a teenager? Because obviously you were diagnosed at 26, so you were extremely young. What was your diet like as you moved through your teenage years into your early adult years? What were you eating?

Chris: It was the standard American diet. 100%. It was fast food, processed food, junk food.

Dr. B: Did you have a favorite fast food place? Where did you like to go?

Chris: I'll tell you my least favorite was McDonald's. For sure. But anything but McDonald's. So, whatever I was in the mood for. I mean, it was Burger King, KFC, Pizza Hut, Taco Bell, Subway. I mean, I really became a barbecue connoisseur in college. And so, I was eating barbecue all the time. I mean, at least once or twice a week. There's barbecue joints all over Memphis. Right?

Dr. B: Right. That's Memphis.

Chris: Yeah. Beer and barbecue. And so, yeah, I really got into the hole-in-the-wall barbecue places, sort of in the middle of the hood. It was like a special trip. I would make that trip. Like I would drive into the middle of the hood. Like bad parts of town to eat some spectacular barbecue.

Dr. B: Well, to be honest, I know we're probably not supposed to be celebrating this kind of food. Right? I mean, we're here to talk about the power of a healthy diet. And that is not healthy food. But I know exactly what you mean because that's the way that I used to eat. And I discovered that there was this inverse relationship between barbecue joints and how clean they look. Like the dirtier they look on the outside, or the dingier they are, or the harder they are to get to, usually the better the food was, back in the day when I would eat that way.

Chris: Oh, for sure.

Dr. B: And the funny thing is I can relate to you because you and I are actually quite similar in age. Basically, we would have been like chums in high school together. And I grew up the same way, eating the standard American diet. I loved Taco Bell. I loved getting KFC. Or I would go to the buffet at Pizza Hut. I grew up in upstate New York. And my parents were divorced. And my brothers and I would come home, my mom was working, and we would play basketball if the weather was nice. And we would fire up the grill and we'd just throw like six hot dogs on the grill. And that's what we would do. And we would do that a couple of times a week. And so, that's the diet that I grew up on. And I was always skinny and I could get away with it. And I was an athlete in high school. And the years started going by.

And all of a sudden, I was 30 years old. So, I was actually kind of in a similar age to you when you were diagnosed. And I was 30 years old. And let me just be honest, I was miserable. I was miserable. I mean, you're reading my resume. And people who knew me at the time, if they knew me professionally, they would look at me and go, "What? How can you be miserable? You are accomplishing all these things at Northwest. You're the chief resident of Northwestern. You're getting a master's degree in clinical research at night. And Northwestern is paying for it. You don't even have to pay." But I was absolutely miserable. I had gained 50 pounds. I had high blood pressure, I had a lot of anxiety. I basically had to be on nonstop caffeine throughout the day, just to keep myself going. I had very low self-esteem, despite anything that I was able to accomplish. And so, I was just not in a good place.

And people wonder how a doctor becomes compelled to do things like talk about nutrition. The reality is that the system is not going to do it for you. Nutrition was not a part of my medical education – barely in medical school, not at all during residency or my fellowship. Even though I was training at these great institutions. I had to become the person who needed a fix. And when I had this problem, I had gained 50 pounds, I didn't know how to fix my own problem – even though I was a doctor, I was the chief resident at Northwestern. I thought that I could out exercise it. I always thought, "Okay, look, you're young, you're a guy. If you exercise, you can eat whatever you want." So, I would go to the gym and I would do these ridiculous workouts. I was working out like literally

30 to 45 minutes of weights, 6 times a week. And then, after I was done with lifting weights, I would jump on the treadmill for a 5 to 10k, or swim 100 laps if it was the summertime.

And despite that, I just couldn't lose the weight. No matter what I did. And things changed for me when I met the person who is now my wife. Because we started dating and I saw that she ate different than anyone I'd ever been around in my entire life. We would go to a restaurant and she would pull the waiter aside and be like, "Hey, I know this is not on the menu, but could you have the chef just like basically take a bunch of the sides, the plant sides, put it together on a plate, and make it look nice? That's what I want for dinner." And I was like, "What the heck? Who orders that? There's a ribeye on the menu. What are you doing?" But I saw that she could eat without restriction. She was not counting calories. She was enjoying her food in abundance, and she could maintain her healthy weight and look amazing.

And so, for me, that just opened my mind. Like, "Gosh, maybe there's something to that. I've got to check that out." So, one day, rather than going to Hardy's and getting the \$5 meal deal that got you a double cheeseburger and chili cheese dog (because the double cheeseburger meal is)... Rather than getting that, I went home and I made a big old smoothie – like 35 ounces of greens, bananas, berries, some seeds – and it satisfied me. I was full. But I was also energized. I felt great. I actually went to the gym an hour later and smashed a great workout. And that was enough to be like, "Ooh, I want to try that again." And I started moving in that direction.

And it was not something that happened overnight. This was not like, "Hey, that was the day that I transitioned and permanently became 100% whole food plant-based." This took time for me to change. But it started a process where I was like on a path of discovery. I was seeking health. I was seeking health. I was looking for ways to improve my health and make substitutions that weren't that hard for me to do. But that were really starting to add up to massive results. And the weight just started melting off of me. And so, the thing is... So, there's the normal guy getting this figured out, but then there's the doctor in me who's like, "I'm a scientist. I'm a scientist. I need to see the science. I don't buy this unless the science is there."

So, I went to the medical literature thinking there would be like 5-10 crappy studies. And in fact, I found like literally thousands of studies. And I'm sitting there, "I'm like, why have I not heard anything about this?" So, over the course of time I brought it into my clinic. I brought it into my practice. And I had amazing results with my patients – like amazing results. And it got to the point where it I felt so compelled to spread this message that I started doing things that frankly felt a little bit unnatural to me. I'm not really a social media guy. I don't really love it, to be honest with you. It seems weird to say that, but I don't. And I

decided to start a social media account just to share this story. And next thing I knew, one thing lead to another, and I had a book deal. And that was not the plan. I just wasn't really planning that. I just felt like I needed to share this story. And now, here we are. And I'm on Chris Beat Cancer. And dreams do come true.

Chris: You are. Yes. Well, if I'm your dream coming true, you need bigger dreams, my friend. But man, I love that. And there's several things you said that I'd love to comment on. And one of them was, med school is brutal. I mean, I know lots of people who've been through med school. I've interviewed Dr. Pamela Wible. And I don't know if you know Pam; she's a medical doctor. But her entire life mission now is preventing doctor suicide. This is her life's work. And she has a wall in her office that is full of headshots of all the doctors that she knows have committed suicide. And it's very difficult. So, when you were saying you were just depressed and really struggling mentally and emotionally, that's normal for a med student. It's really difficult.

And we just heard about a doctor in New York who committed suicide. It was national new. Treating COVID patients or whatever. Tragically. I mean, I don't know the reason she committed suicide, but I can speculate that she was just overwhelmed. Just completely overloaded, overwhelmed, discouraged, feeling hopeless, all of the above. And so, that leads us to self-medicate with food and whatever. And it's interesting because you were really hitting it hard at the gym. And it's like, you can't out exercise a bad diet, right? And a lot of people try, and I give them credit. Because exercise is awesome. It's so wonderful for your body. But if you don't get the diet right, you're still going to not look the way you want to look. Even if your only motivation is to look good naked, the food is really what's going to get you chiseled.

And so, anyway, I feel like your experience is so common, in terms of the med school experience. But it's amazing and encouraging and so cool that you decided like, "Hey, I've got to fix this. I've got to figure this out." And then, you go looking to see if there's any studies on it. And there's more studies than you can even read. Hundreds of thousands of nutritional science studies. Like no one can read them all. Dr. Greger is trying to read them all, and has probably read more than anyone else. But yeah, I mean, it's mind blowing how much nutritional science is out there. How much nutritional science education did you get in med school?

Dr. B: So, it was two weeks. But I want people to understand that even if it were two weeks and it were actual nutrition, that would be a lot better than what it actually was. In fact, what it was, was stuff more like, "Hey, here's a weird vitamin deficiency that you literally will probably never diagnose in your entire career. And you need to memorize what the symptoms of that weird vitamin deficiency is that you'll never see." It wasn't practical stuff. It wasn't how to talk to a human being. It wasn't

how to understand different diets and their impact on human health. It wasn't anything like that. It was just weird vitamin and mineral deficiencies.

Chris: Like beriberi, rickets, and scurvy?

Dr. B: Exactly. Exactly. That's what it was. Yeah.

Chris: Yeah. Right. Most of my audience has heard these kinds of things, right? Lots of times. But there's always new people finding me. And so, I feel like it's important for someone that's brand new, trying to figure out what's going on, that they understand that physicians are trained to do a limited number of things really well. And the skills that they're given in med school and beyond med school have nothing to do with diet and lifestyle. And the ones that are practicing diet and lifestyle medicine, like yourself, have self-educated. They've had to go back to school. Right? And you went to Cornell, so you actually really did go to a school for nutrition. But yeah, I mean it's a reeducation process to figure out, "Okay, wait a second. What diseases are caused by poor nutrition? How do we prevent them? Wow, it's most of them."

Dr. B: Well, absolutely. I mean, statistically speaking, we know that only about 20% of disease is actually genetically motivated. So, what that means is that 80% of disease... And I actually view this as a very empowering thing. For the most part, we are not victims of the genetic profile that we inherited from our parents. There is a lot of say that we have – 80% of our health and disease during our lifetime is in our control. And it is diet and lifestyle that are going to be the driving factors. And one of the things that I realized very early on, as I started to study nutrition, is that it blows my mind how we overemphasize milligrams of medicine when we're eating pounds of food. You know, we worry so much about a couple of milligrams of medicine, and we're eating like literally a thousand pounds of food per year per person. 80,000 pounds of food during your lifetime. That is ultimately going to make up what happens to you from a health and wellness, versus disease, perspective. I mean, that's what's going to drive it.

Chris: Yeah. And I love the way you put that. I hear funny things from cancer patients like, "You know, my doctor told me not to drink carrot juice. It's too much vitamin A." You know what I mean? But chemo is fine. Chemo is totally fine. No problem there. But don't get too much vitamin A from the carrots. That's a big risk.

Dr. B: Right. Right. No, I mean, I think that one of the challenges is that... I think doctors feel the weight of an expectation to always have answers and always be right. And I think it's part of our training. You know, if we were taught more like attorneys, it probably would be good for us because we would realize that there's a lot of gray. Attorneys are not taught that there's a right and a wrong. There's no such thing as wrong

in the legal world. There's just, which side of the argument you're taking and you're going to fight for it. Whereas, you know, in medicine there is a lot of gray. But we're taught because of the way that we're trained and like our medical education that, "Oh, the textbook says this. So, this is the correct answer." When, in fact, that's not the way the body works.

Chris: Which is also very unscientific. Right?

Dr. B: Right.

Chris: I mean, science and medicine are intertwined. But someone who is only trained in science is trained almost parallel to an attorney, which is we have some knowledge and we're going to keep asking questions. And we're going to keep testing, and testing hypotheses. And never assume anything is settled. Right? It's like, this is the most pure application of science: here's what we know, but we could be wrong. Right? Things are changing all the time. Like, let's look at this subjectively. Let's not assume anything. And let's work together to figure this out. Right. But yeah, I'm so glad you brought that up because there is sort of a contradiction in that medicine is very scientific, but it's sort of indoctrinating that there's only one way, which is unscientific.

Dr. B: Right. Exactly. And I think what that is, is truly the limitations of us being human. Right? Which is that as a human being, you have your biases. You have your limitations, in terms of hours in the day. I mean, like you alluded to, the fact that medical training is brutal. Like it's probably worse than people would conceptualize. I mean, 6 days a week, 16 hours a day are the kind of stuff that you're talking about. You're so tired that you're falling asleep mid-conversation with people sometimes. You don't have time to wash your boxer shorts. So, that's how crazy it gets. And you do that for a year at a time. And then you pick it back up and you do it again for another year. And then, you do another year. And you just keep doing it. And so, the issue is, when a person comes out... I was 34 years old when I finally finished my training. Okay? When a person comes out...

Chris: So, that was like 12 years of your life after college.

Dr. B: Exactly. 12 years after college – 4 years of med school, 4 years of internal medicine, 4 years of GI training. And I come out. And most people, at that point, they're like, "Look. Enough. Enough. You have controlled the entire decade of my twenties. You have controlled the early part of my thirties. I've given you enough. It's time for you to give me something back." And I understand why people feel that way. And so, you go to work and you just want something that's closer to normal. You want to be able to work 8-5. You're going to work hard.

You want to be compensated fairly. You have medical debt that's been accumulating interest. Most people don't realize that young doctors these

days...we're not rich. I mean, we're paying off our education. And so, that's how most people feel. So, the idea or the specter of like, "Hey, what about nutrition?" Like the patient is like, "Well, what about nutrition?" And the doctor is just like, "I am broken. I am broken. I don't have time to learn what you are asking me to learn. I've done my time. I've accomplished my education. And I need to be able to just use what I've learned and apply it." And so, most people, I think it's just a place that they were not taught. They feel like they were taught how to be a doctor and there's just no room left to extend that into a new dimension.

For me, I can't... I'm sure you would agree with this, Chris. And I'm sure your listeners at home would agree with this too. Many times, the thing that's in our personality or part of our spirit or part of our soul that is our greatest strength is also our greatest weakness. I can't change the fact that when my patient asks me, "Hey doc, what's the best diet to eat for IBS?" "Hey doc, I've got Crohn's disease. How can I keep myself in remission better?" "Hey doc, I was just diagnosed with cancer and I want to prevent anything from coming back." Those questions, for me, I have to go home and find the answers. I can't help it. And that's just who I am. And it's because I think I'm doing what I was put on this planet to do. To be a doctor. If it was about the money, I would have been a banker. And it would have been much better for me. It would have been a lot easier.

Chris: Yes. I understand that. And also, it's like if you had not done your own research, you would have invested 12 years of your life. And then gone into the practice you have now. And when a patient asks you the question, "What's the best diet for IBS?" And your answer would have been, "I don't know." Right? "12 years invested and I don't even know the answer. And no one told me what you should eat to help your gut." Right?

Dr. B: And this is why doctors, the response can oftentimes be dismissive. It can be, "Look, that's just not part of what I do." It can be, "Hey, go talk to this other person." And that's the reason why you get that response from doctors. And many times, that's the reason. They just don't actually have a great answer to that question because they weren't taught that. So, anyway, for me, I just, I had to find the answers to this. And then, you start finding it and you go, "Oh my gosh. Look at how powerful this is." And no one's talking about it.

You know, 97% of Americans are not getting the minimal daily amount of fiber. And look at the different ways that it would protect all of these different conditions. People are dying of heart disease, cancer, stroke, diabetes, obesity, chronic kidney disease. You go down the line and it's like, every single one of these things could be improved, could be reversed, could be prevented with dietary changes and addressing this fiber deficiency. And I don't mean fiber supplementation, I mean real food.

Chris: Right. I'm just thinking about what you said. And I think it really is so helpful for the average person to understand how a doctor comes to be a doctor. Like the 12 years. How brutal it is. Dr. Pam Wibel, I'm paraphrasing her, but she's like, "They basically just beat you down and crush your soul. And it's all about conformity. Like you've got to do it this way, think this way, act this way. And these are the answers you give patients. And that's it. And there's nothing else." And man, I'm just so glad that you went on your own process of self discovery without having some kind of urgent problem. I mean, I had an urgent problem. It was like, "I'm dying. I need to help myself." But you went on that process of discovery, obviously to help yourself out of a situation that was not good. But beyond that, because you wanted to help patients get well and it's amazing.

I've been watching America's Got Talent lately. The reruns from last season. Because my 11 year old daughter loves the show. And it's a great show. I mean, there's so much joy and hope and inspiration. It really is just a wonderful show. And there's so much "feel good" stuff in there. But every other commercial is a drug commercial. Every other commercial. It's ridiculous. Sometimes it's just back to back drug commercials. And we've got this little funny game we've been playing where we've been acting out the symptoms when the drug commercials come on. Like playing charades when it's like, "May cause uncontrollable muscle movements, back spasms, difficulty breathing." So, we've been doing this funny thing with each other. And we try to act out all the symptoms as fast as we can, as fast as they are rattled them off. But that's the state of medicine now. The public is being so ingrained with just drugs, drugs, drugs, drugs, drugs. And a lot of Americans don't realize that drug companies aren't allowed to advertise in a lot of other countries.

Dr. B: Absolutely. Well, there's a lot of things that people do in our country that you're not allowed to do in other countries. And unfortunately, many of these things that we're referring to are things that are at the expense of the American health. For example, like people don't realize 80% of antibiotics are injected into livestock as part of animal agriculture. And we are breeding antibiotic resistance with our agricultural practices. And why do people do it? They do it because the cow will gain 15% more weight because you treat them with antibiotics. Basically because you're destroying the cow's gut. Basically because you're destroying the cow's gut. Just like, in the same way, that if you give human beings repeating antibiotics, they will gain weight. It's the same thing. So, you can't do that in Europe. That's actually illegal.

But what I wanted to say real quick, Chris, is that I think it's interesting to take a step back and think about... Because you and I are from the same generation, and our grandparents were the Great Depression and World War II generation. And think about where modern healthcare came from. World War II ended. We had just discovered penicillin. And we go, "Oh my gosh, look at this drug. Look at what it does." And that was the

greatest discovery in modern medical history, adding years to human life expectancy. Adding years.

And when that happened, it sent us down this path that was unhealthy for us, in the sense that we started focusing on pills. We started focusing on medical device development procedures. And we became enamored with the idea that you could fix medical issues with a pill, the way that we had just seen with penicillin. Like, "Oh my gosh. You only have to take a pill? That's so easy. I don't have to do anything else? That's it? Just take a pill? That's incredible." Right? And you can understand where, back 70 years ago, that novel idea was so powerful and exciting and sexy that you had no choice but to follow that path.

But the problem is, we followed that path so vigorously that we lost sight of the fundamentals. And in the process, we created a healthcare system that is designed for acute illness. I pray that this doesn't happen, but if I come down with COVID-19 and I'm acutely ill, thank God we have a great healthcare system with great doctors and mechanical respirators and the types of things that we need to try to keep someone alive. Right? We're designed for acute illness. But what we have completely lost sight of is how to manage chronic illness. How to prevent illness. How to talk to people about diet and lifestyle, which are the fundamentals of human health. We've completely lost sight of that. And now, here we are suffering the consequences as a result of that.

Chris: You know, one of the things that I talk about in my book and my course and try to educate people on is basically what you said. There's two types of disease: chronic and infectious. And a lot of people have never thought in terms of two very distinct types. Infectious is viruses, bacteria, parasites, pathogens. Right? Microbial stuff. Chronic is caused by our diet and lifestyle. And most of the diseases that we suffer from, the vast majority of them, are in the chronic disease category caused by food, lack of exercise, stress, things like that. And like you said earlier, they're not genetic. These are things we have complete control over. And the infectious disease part is like, "Oh gosh, I hope I don't get a virus. I hope I don't get a bacterial infection. Whatever." Right?

But it's been interesting with the COVID thing happening because there's been so much talk about who is most at risk. And the people who are vulnerable most at risk of severe infection and death from the Corona virus – and I would add from flu and other life threatening infections and bacteria – are the people who had one or more chronic diseases. Right? So, a lifetime of choices that were not optimal put their body in a vulnerable position where if a virus came along it could do some serious damage. So, they're intertwined. I used to think of them in separate categories. But they really aren't. If you don't focus on the chronic disease prevention side, then you're also more vulnerable to infectious disease.

Dr. B:

Yeah. Let's actually unpack that because I think it's very relevant to what's happening in the United States right now. And it's also frankly relevant to what I'm here to talk about today, which is how to optimize your gut health through diet and lifestyle. Because when you go down the mine, you alluded to this, 96% of people who die from COVID-19 have at least one comorbidity – at least one chronic illness. And what we're talking about is chronic lung disease from smoking, asthma, high blood pressure, type-2 diabetes, heart disease (specifically coronary artery disease), chronic kidney disease, and obesity. Now, when you think about this list, what most people may not realize, what ties this together... I mean, it's very easy to say, "Oh well those are the diseases of either smoking or an unhealthy diet." And that is completely true.

But what also is interesting, Chris, is that when you look at this, every single one of those disease states that I just mentioned, every single one, has been associated with alteration or damage to the gut microbiome. And if you go and you open up my book and you go to chapter one, you're going to find tables that lay out for you the way that your gut interacts with your immune system, with your metabolism, your hormonal balance, your brain and your cognition, and even your genetic expression. And in all of those tables, you will find these conditions. These disease states that I've just mentioned. They're all associated with alteration or damage to the gut.

And I think the point is this... This is the important takeaway message. There has never been a more important time to focus on gut health than right now. And part of the reason why is that the underpinnings of these conditions that we're talking about involve the gut microbiome. When you optimize the gut microbiome, you have the opportunity to prevent and reverse these particular conditions that are making us susceptible or vulnerable to COVID-19.

But the second part of this is a study that literally just came out this week. Literally just came out this week. And I have to tell you that it is not peer reviewed. So, part of the reason why it's not peer reviewed is that right now we're in a state where scientists want to get information out to the public as quickly as possible. So, under normal conditions when there is not sense of urgency, you would peer review this study and you would wait an extra six weeks or eight weeks to get it out. But right now we're trying to save lives.

And there's a study that came out literally this week where they found that when they... There's a big question that's looming out there, probably the most important question honestly with regard to this virus, the novel coronavirus... Why does one person only get mild mild symptoms, perhaps no symptoms at all, and another person will have severe disease to the point that it would drive them into the hospital and potentially threaten their life? Why does that happen? How can we identify who's really going to have that issue? You listed the conditions,

the fact that there is a co-morbid illness associated with higher risk. And in this study, they actually did an examination specifically of the gut microbiome, with regard to the risk of severe disease.

And what they found is that (no surprise) alteration or damage of the gut microbiome is also associated with an increased risk of severe COVID-19. Because there is – this is one of the important takeaways from this conversation today – that there is a direct line between your diet, your gut health, and your immune system. Those three things are completely intertwined with each other. And you are the one making the choice, on the dietary side. And that ultimately is leading to downstream effects on your gut and your immune system because 70% of the immune system is right there in the wall of your intestine next to your gut microbiome. 70% of the immune system is right there. And so, when you damage the gut, you damage the immune system. And vice versa. And so, I think that's one of the really important points for people to understand when you bring up COVID-19 and these co-morbidities.

Chris: It's huge. That's amazing. I have not seen that study. I love it. We'll link to it in the show notes. But it makes a ton of sense to me. One of the first key concepts that I learned when I was diagnosed with cancer and I started reading books written by doctors and survivors and experts in natural health and healing, was that disease starts in the gut. This idea. Disease starts in the gut. And I'm like, "Really? The gut? You're saying that the gut..." Like I'd never even thought about the gut, but I did have a gut disease. And this was like 2004, when I was starting to try and understand these things. And health and disease start in the gut.

I'm like, "Okay, I guess I need to focus on my gut health. How do I do that?" And now, it's been 16 years since then. Gut health is a pretty sexy topic. The microbiome is definitely hot stuff. And there's a lot of people out there that are, I feel like, trying to exploit a fad by selling a bunch of products to optimize your microbiome and stuff like that. Which I'd love to get into with you. And I'm sure we will just in a minute. But yeah, that is such an important takeaway. That 70% of your immune system is in your gut. If your gut is unhealthy, if you've got digestive problems, chronic gut inflammation, diarrhea, constipation, whatever... It's not just a problem with your poop. You have a bigger problem going on and it's affecting your whole body and making you vulnerable to other types of disease.

So, let's talk about specifics. What are we doing wrong that is hurting our digestive track, hurting our colons, hurting our guts? And what do we need to be doing?

Dr. B: I feel like one of the themes of the episode is taking a walk down memory lane. A moment ago I was referring to our grandparents' generation, which was the Great Depression and World War II generation. And now, I want to refer to one generation before that. Think about a hundred years

ago and what life was like. It was radically different. I mean, just a hundred years. Think about the food that they ate. Meals were cooked at home. They sourced their ingredients from the local market, which sourced their ingredients from the local farmer. There were no herbicides, no pesticides, nothing funny like that. You probably knew the farmer, and they may have had a farmer's market that you went to. Most people didn't have cars. Most people got around however they needed to get around. In some cases it was bikes and in some cases it was walking,

Chris: Let's not forget horse and buggy.

Dr. B: Horse and buggy. And they spent time outdoors. There was no television. There were no chemicals in the home. There were no antibiotics at that time. Now, to be fair, the number one cause of death at that time was infection.

Chris: Basically everyone was Amish.

Dr. B: Right. Exactly. That's what life was like. That's what life was like. And it was radically different, compared to today. And now here we are. And 60% of the American diet – the diet that you and I both grew up on and had our own issues in different ways (yours obviously more extreme) – is processed food. Processed food didn't exist back then. 30% of the American diet is meat, dairy, and eggs. But we've streamlined agricultural practices that have really diminished the quality of those foods, at the expense of human health. And now here we are, and only 10% of our diet is fruits, vegetables, whole grains, seeds, nuts, and legumes.

Chris: Even less, in some cases. Right? I mean, that was like 1% of my diet leading up to this.

Dr. B: For me it was the onions on the chili cheese dog. That was about it.

Chris: And we grew up in the fast food generation. Right? We are the happy meal generation. And when we were kids watching the cartoons after school or on Saturday morning, the commercials were for like McDonald's and Burger King. Right? All the fast food companies running commercials were targeting kids, for sure, to get us in there. And if we're asking mom and dad to go to McDonald's, then mom and dad are going to be eating McDonald's too. And so, the marketing in the 80's was so sophisticated. Not that it isn't now; it's still sophisticated. But it was so sophisticated, in the sense that all these fast food companies realized, "We need to target kids. And if we can get the kids in, then we get the parents in. And then, they keep coming back. And we put the toys in the happy meal." I mean, that right there. The happy meal with the toy. That was like billions of dollars generated in McDonald's sales. Just from that little idea.

Dr. B: Not to mention the commercials with Michael Jordan, who we all idolized. And the problem still exists. I mean, honestly, because we subsidize it. Right? So, we subsidize the beef directly. Or we subsidize the soy and the corn, so that you're indirectly subsidizing the beef because that's what the cows eat. And we make it so that a family that's of low income status can take their kids to McDonald's. And they jump for joy that you're taking them to McDonald's. And they're happy and they love it and they kiss you and they say, "Thank you so much mommy and daddy." And it costs you less than five bucks to do that. And that's a problem because we're actually subsidizing the next generation being sick, being ill. And it keeps carrying forward one after another.

Chris: So, what are the foods that hurt the gut? And how do they do it?

Dr. B: Well, I think that it's the foods that many of us have vilified. And maybe to me, I extend it a little bit further. So, processed foods. We know that there are literally 10,000 food additives. 10,000 approved by the FDA. Now, less than 20% of them have had any human testing at all. 80% of them have never even had human testing. They get snuck in under a loophole called G test and we recognize it as safe. But even the ones that have had human testing, "Oh, that sounds so reassuring. They've had human testing." Okay, so they test the human for a week. They're still alive. Their kidneys haven't failed. Their liver hasn't failed. So, we approve it. Does that mean that it's good for you to eat for the next 30 years? We have no testing to know whether or not these foods are safe. And some of them, when we study them in the microbiome, it becomes very clear that they're not. But the problem is that out of 10,000 we've only tested like 7 or 8 of them. So, you just don't know, when it comes to the processed food.

Chris: And let me add to that. The toxic synergy of all of them in your gut at the same time...that can't be good.

Dr. B: 100%. You know, I was actually just talking to someone earlier today... Think about the cold cuts. Think about the deli meat sandwiches that we grew up on. Those were my favorite.

Chris: Subway club.

Dr. B: Right. Think about the fact that the meat sits there for months on end and never rots and never changes. Now, we grew up and just accepted that that's the way it is. It's a cold cut. That's what it does. Right? But how does it do that? Well, the answer is that it has preservatives that retard bacteria. The bacteria are what breakdown the food. So, what do you think happens when you take cold cuts, deli meats, and you drop them down into your colon where there's 39 trillion microbes? It's decimating them. And it's no coincidence... Chris, of all the foods that exist, what is the food that's most closely associated to colon cancer?

Chris: That would be processed meats.

Dr. B: Processed meats. The World Health Organization has identified it as an actual carcinogen.

Chris: Yup.

Dr. B: Red meat right after that.

Chris: Bacon, hot dogs, ham, deli meats, pepperoni, sausages. What am I leaving out? That's most of them. That's process meat. And, of course, like spam.

Dr. B: And I just mentioned, by the way, I just kind of snuck it in there, that red meat has also been associated with increased risk of developing colon cancer.

Chris: Yeah.

Dr. B: Now, is it that the red meat has these preservatives? No. So, it must be a different mechanism. Guess what? When we study red meat and specifically saturated fat, saturated fat clearly causes damage to the gut microbiome. So, here we are and we have this diet that's made up of chemicals that our gut has never been exposed to, prior to the last couple of years, in our processed food. And we're also exposed to a very, very high... We eat more meat than any country in the world, which is extremely high in saturated fat. We're destroying our gut. And we're asking questions that honestly feel really silly. Like, "Where am I going to get my protein from?" When every single one of us is getting 200% more protein than we actually need.

And then, we never ask, "Well what about fiber?" And 97% of us in the United States are not getting even the minimal daily amount of fiber. Chris, when we do studies looking at fiber intake and we're trying to look at health outcomes... A common way that we'll do this study is by lining up a population of people, and we'll take the top 20% and we'll compare it to the bottom 20%. So,, conceptually what we're doing is we're saying, "Hey, what's compared to the high fiber consumers to the low fiber consumers." Here's the problem. In the United States, even the high fiber consumers are still low fiber.

Chris: Yeah. I'm so glad you brought that up because that's sort of like this unhealthy population bias that we have in so many studies, where you're trying to compare healthy people to unhealthy people. But as a whole, the whole group is unhealthy. And there's just some that are less unhealthy than others. But you don't really have a true healthy population like you're going to find in Sub-Saharan Africa or somewhere where they're still eating whole foods.

Dr. B: Yeah. And the other thing that people at home should know is that nutritional research is always about substitutions. It's always about substitution. So the question is, what are you replacing with what? And if you level up, you can make anything look good. Right? So, a couple of years ago, Time magazine says, "Butter is back." And that's because they're comparing butter to something that's less healthy than butter. But that doesn't mean that they're comparing it to eating beans. Compare it to eating beans and tell me which one wins. The beans are going to destroy it.

Chris: Right. Yeah. Those are very deceptive studies. They capture the public's attention because, like you said, you can replace something bad with something less bad. And then, all of a sudden, that less bad thing seems like totally okay.

Dr. B: And people jump with joy and celebrate because you just validated their bad habit. Right? And so, if you want to sell a lot of books, there's a formula that exists: figure out some sort of pseudoscientific way to tell people that their bad habits that they love and are honestly kind of addicted to, are the right choice for them. And you will sell a bazillion books. That's the formula. So, here I am. And I'm trying to sell a book about fiber. Well, guess what? You have to look at the science. You have to look at the science because you may not think fiber is sexy. You may, in your mind, just have this image of your grandma stirring the orange drink so that she could have a bowel movement.

But in reality, that relationship between our gut and fiber is incredibly exciting. And people are missing out. Because what happens is when fiber passes through the intestine untouched and enters into the large intestine where there are 39 trillion microbes, these microbes are in a feeding frenzy. They are ready to eat because they are starving. This is their food. They are picky eaters. They don't like eating the red meat. They don't like the processed food that's killing them. They want fiber. Fiber is what nourishes them and makes them strong. And when they get that, they release to you to pay you back. They release to you what are called short chain fatty acids. Which have healing effects throughout the entire body. Which reverse leaky gut, heal the colon. Which have been shown to directly impair colon cancer. Which affect the immune system, affect cholesterol, diabetes, our heart, and even travel all the way up. And cross the blood brain barrier and optimize our brain, improve our memory, improve our focus. These things are universally healing.

Chris: And this is butyrate.

Dr. B: We're talking about butyrate. We're talking about butyrate, acetate, and propionate. These are the family of short chain fatty acids. And the way that you get them is through fiber, which 97% of us are not getting enough of.

Chris: And for anybody that when you say fiber all they can think of is like tree bark, I want to be clear. Fiber is fruit, fiber is vegetables, fiber is whole grains, fiber is legumes. You're not talking about a fiber supplement. You're not talking about Metamucil. You're talking about eating whole plant foods, which are rich in starch and fiber.

Dr. B: 100%. And the thing to understand is it's not just grams of fiber. Grams of fiber is relevant. But if you're doing your diet the way that you're supposed to, you don't need to count grams of fiber. What becomes important is the diversity within your diet. Because every single one of these foods – fruits, vegetables, whole grains, seeds, nuts, legumes – every single one has its own population, its own little tribe of bacteria that it's going to feed. These bacteria are picky eaters. They're like us. They have specific types of things that they like. So, if you eat black beans, there are specific bacteria that will thrive because you're eating black beans. But you know what happens if you get rid of the beans? "I'm getting rid of the beans, I'm cutting them out entirely." Those same bacteria starve.

Chris: Yeah. The population dies off. Right?

Dr. B: They die off. And then, you lose diversity within your gut. And when you lose diversity, that's when you are really causing harm because that's when disease shows up. So, it's interesting because you made a reference to Sub-Saharan Africa. And I don't know if your listeners have ever heard you talk about this, but in Tanzania there is a tribe of people called the Hadza.

Chris: I've talked about the Hadza. Please continue.

Dr. B: They are living a Paleolithic lifestyle.

Chris: The last paleo people, really, on earth.

Dr. B: They're the last paleo people. They have no farming practice at all. They are hunters and gatherers, but they live in modern times. And unfortunately, they're eroding away because many of the younger people in the tribe discovered cell phones and decided that they want to enter into the local society. Okay? Right?

Chris: They're on Twitter now.

Dr. B: They're on Twitter. What's interesting is that when you look at this population of people and the way that they eat, number one, they have 40% more diversity than we have in the United States. 40%. So, what is their diet? Well, they're not vegan. Right? But they're predominantly plant-based. They're getting more than 100 grams of fiber per day. And I mentioned diversity. The reason why I mention diversity real quick is that there's a study called the American Gut Project. By the way, this is a

very powerful study. The best way to connect diet and lifestyle to the health of our microbiome. And in the American Gut Project they've found that the strongest predictor by far of a healthy gut microbiome was the diversity of plants in your diet.

Chris: Nice.

Dr. B: It goes back to this idea that I've put out, that different types of plants feed different types of microbes. More diversity of plants means more diversity of microbes. We validate this when we look at the Hadza. They have 40% more diversity than we have. Guess how many species of plants... So, Chris, I'm curious. I'm guessing for you it's a high number compared to most people, but just give me a number that pops into your head. How many plants do you think you eat in a given week?

Chris: Well, it depends on how you measure it. But I consume 12 to 15 servings of plant food per day. 3 meals. Each meal is going to have 4 or 5 servings of plant food. And it is very diverse for me. Oatmeal with flax, chia, hemp seed, walnuts, blueberries, cinnamon, all spice, curry powder. So, that's most days. Lunch is a smoothie with 3, 4, 5 different types of berries – strawberries, blueberries, raspberries, cherries, sometimes cranberries. Leafy greens, almonds, more hemp seed, dates. For dinner we typically would have either a big giant salad with tons of different types of vegetables in it, or a plate full of cooked veggies. So, it could be black beans, red rice, cooked collards, bok choy, green beans, sweet potato. I mean, I kind of eat the same thing every day for breakfast and lunch. And at dinner, we mix it up every night. So, it's hard for me to even count like how many different servings. I know how many servings I get, but how many different types of plant food...

Dr. B: You are a guy who beat cancer by eating plants. You love plants. They are your lifeline. Right? They course through your veins. That's the way that you are. That's the way that you've been living for more than 10 years now. For 15 years. It's the way you've been living. And so, for you, this has become your mindset. And you've fallen into this. And I'm guessing that you definitely are north of 30 plants per week. You're probably north of 40 plants per week.

Chris: Yeah. That's probably about right. Somewhere in there.

Dr. B: In the American Gut Project, the people that had the benefit of that most optimal gut microbiome were the people getting more than 30 plants per week. Now, this is not a magic number. It's not like, "Hey, 30 is magically better than 29." You know, 40 is better than 30 if you want more. But the point is that our society and our way of eating and our food system is not naturally giving this to us. You personally have found this because you beat cancer and this became your lifeline. But for other people, we need to make this our actual practice, in order to accomplish this.

And you compare that to the Hadza who live off the land. They live off the land the way that we did, whatever ecosystem we found ourselves in. And they have 600 varieties of plants that they eat. 100 grams of fiber per day, 600 varieties. So, it comes as no surprise that they have 40% more diversity in their microbiome than we do. And right now, it's kind of crazy to imagine this... Scientists, Chris, are literally taking stool specimens from these tribal people, and they're freezing them and they're saving them. It's like an end of the world...

Chris: Time capsule.

Dr. B: Time capsule. Right. Exactly. They're putting it away because they're like, "Look, we kind of don't know what's happening with the American lifestyle and what it's doing to our gut. So, just in case, let's collect this before all the Hadza are gone because their tribe is falling apart."

Chris: Yeah. And you know, Dr. Denis Burkitt was doing this in the 60's and 70's. He was the first to collect stool samples from African tribes. And he wasn't even looking at microbiome back then, like at bacteria. But he was measuring their stools – the size, the weight, the volume, the color, the characteristics of each poop – and comparing the Africans to Americans and Europeans. And the distinctions were so vast, even just inside those parameters. He wasn't even looking at, like I said, the bacterial composition of their stools. But he was like, "Their stools are twice as big. They're pooping two to three times a day. They're pooping easily. There's no constipation." And these people also, by the way, have no gut diseases. They don't have Crohn's, colitis, hemorrhoids, colon cancer. And there's lots of other non-gut diseases they didn't have either. So, this has been going on for a long time. And that's what actually informed that pamphlet I mentioned in the beginning of our interview. Burkitt's research was informing this stuff that they've known in gastroenterology for decades, but that they're not training the doctors.

Dr. B: Right. Right. And we're ignoring it. I mean, the information is there and we're ignoring it. And honestly, Denis Burkitt should be given like a retroactive Nobel prize for what he did because he's so right. And basically, what he was predicting is what would ultimately come back to bite us in the tail 50 years later. Right? And now, here we are and we see all these emerging problems. And they're all being connected back to this. And he famously said, "Big poops need small hospitals. Small poops need big houses."

Chris: I love Dr. Burkitt so much.

Dr. B: And there's one study that I cite in my book in chapter two, because chapter two is called "Overfed, undernourished and hyper medicated." And the entire chapter is about what has changed. a few minutes ago you asked me, "So, what has changed? Like what is it about our life?" And one of the studies that I cite is fascinating because in the United

States, first of all, we have the highest colon cancer rates in the world. No coincidence that we eat the most red meat in the world. And the population within the United States that has it actually more frequently and also more aggressively is the African American population. And Justin Sonnenberg did a study. He's one of the world's most famous microbiome researchers who also is supporting my book. He endorsed my book.

He compared the rates of colon cancer between the African Americans from the United States and native Africans from South Africa. And what he discovered is... Let me frame this before I say this statistic because it's so ridiculous that I have to say this. To say that it would be twice as much, would be absurd. To say that it's 200% more would be absurd. He found that it was 60 times more colon cancer. 60 times more colon cancer. So, he did a really interesting study where he took populations of African Americans and native Africans and he had them switch their diets. The African diet swap. And the African Americans ate a high fiber, low fat diet.

And what they saw very quickly, within a few weeks, is an escalation of healthy microbes and an increase in butyrate, which (by the way) protects against colon cancer. That's the short chain fatty acid that we're talking about. And a reduction dramatic reduction in TMAO, which has been associated with heart disease and stroke and chronic kidney disease. And so, basically, we're seeing already you're flipping the profile on a biochemical level. You're flipping the profile on a biochemical level within weeks. And the opposite was true. These poor native Africans had to be subjected to the high fat, low fiber diet. And they saw their TMAO levels spike while their butyrate levels basically died off and declined. And it became very clear how quickly we can change our gut and change our biochemical profile with the food that we choose to eat.

Chris: Yeah, the gut regenerates really fast. And a lot of folks don't know this. Within just a couple of weeks, you can dramatically shift the microbiome in your gut and start to see improvements and changes in your poops. Right? Things really start to work better and your energy levels can change. Chronic disease like inflammatory diseases like psoriasis and other just random stuff can start to resolve really quickly. Like literally just within a couple of weeks. And I've lost count of how many people have reported back to me how amazing they feel after just two weeks of eating tons of fruits and vegetables.

Dr. B: Yes. And literally, there are studies that show us that your gut microbiome will change in 24 hours. To put this into perspective, do you remember the movie *Inception*? The idea is that there are different planes of time. Like what to us may be a day, may be 50 years somewhere else. Right? And it kind of bends the mind to think about. It's kind of like that with our gut microbes. They turn over every 20 minutes. They have a new generation come out every 20 minutes. So, during a day, they'll have

over 50 generations of new microbes that come out. 50 generations of evolution for humans would take us all the way back to the pyramids. That's what they're capable of doing in 24 hours.

So, they're evolving very quickly inside of us. And our dietary choices from one meal to the next are basically triggering that change. And as I was researching my book, I kept coming across studies – and you're alluding to this – that showed that within four weeks, you can radically change your gut microbiome. It kept popping up as sort of a magic number, in a way. It's not to say that in four weeks every single person would be perfectly fine with no gut issues at all. It's just to say that four weeks appears to be a really important number, in terms of changing your gut. And that's why, for my book, I put in a four-week plan. It's a four-week meal plan with 80 recipes.

And basically, it's designed to give people the plan. You read the book. You get psyched up. You see the science. You see the path to better gut health. And you go, "I want to do it." Okay, let's do it. Here's the plan. And this is not a Whole 30. This is not a fad. This is not a diet that you do and then you brag to your friends. This is the beginning, the very first parts, of developing a lifestyle that transforms your health and heals your body. It's a lifestyle that heals. It becomes effortless. It becomes natural. You start to crave it. You love it. You're energized. Your weight becomes natural. All the things that you need are happening. But you need to first take those steps to change your gut microbiome. That's what happened for me. And if we went back to 2003/2004, if we had the ability to check your microbiome, we would see that in you too.

Chris: Yeah. You know, there's a really cool before and after colonoscopy... A guy who found me and started following my advice and became a part of our community, named Casey Ledley, and his wife Jodi is amazing and a really brilliant researcher too. But he had colon cancer. They found me, went 100% plant-based, had a colonoscopy, and within about a month they had another colonoscopy because he was about to have surgery for this colon cancer. And the difference is shocking. In about a month, I think it might've been three weeks, it was less than a month... Between one colonoscopy picture and the other... The first one before he started eating plant-based, the tumor is there, it's inflamed, it's bloody. I mean, it's just like, yikes. And then, the other picture is pink and fleshy and glistening and smooth. And the tumor was still there, but things had changed very quickly. And he went in and had the surgery, just because he had planned on having it. But they were shocked. They didn't expect things to start changing in his gut that fast.

Dr. B: You can starve cancer. You can starve cancer. You stop feeding what fuels the cancer and you move in the opposite direction. And the key is this: there is a clear connection between our gut microbiome and colon cancer. It's completely established. We did not know this in 2003 when you were diagnosed. Now it is completely established. And it's interesting

because dogs can be trained to smell colon cancer. They actually have studies where the dog is like 97% accurate in identifying who has colon cancer, based upon smell alone.

Chris: Do they have a person poop and have them smell the poop? Or do they just smell the person?

Dr. B: I think it was the scent from the poop. They basically captured the scent from the poop. And then, they asked the dog to identify which one had the colon cancer. And it was able to identify it 97% of the time.

Chris: Wow.

Dr. B: And the thing that becomes key is butyrate. Butyrate: the short chain fatty acid. Because it has the ability to... Cancer has a critical weakness. People don't think about it this way. They just think it's a runaway train. But cancer has a critical weakness, which is that in order for cancer to exist, it needs to be able to copy itself and multiply. It's out of control multiplication, which is growth, that is cancer. But if you could stop that multiplication and stop that copying process, you could stop it in its tracks. And in order for cancer to copy itself, it needs something called a histone deacetylase. And butyrate activates histone deacetylase inhibitors that basically stop the copying process.

Now, I'm not sitting here and saying that butyrate is like the only thing that you need in the war against colon cancer. But the point is that your story about your friend with the before and after colonoscopy going on a plant-based diet, there is plenty of science that explains to us what's going on a cellular level to explain that. And it's real. It's not just coincidence. It's real.

Chris: What about fusobacteria?

Dr. B: So, it's an interesting thing because the fusobacteria we've discovered in the mouth, and then it becomes connected back to the colon cancer. And so, there's parts of this that clearly there's connections between our gut microbiome and our oral microbiome. They're not completely separate. There's an intertwined nature. Obviously our oral microbiome impacts gingivitis and things of that variety. So, I feel like there are connections that exist here that we're still trying to figure out. Right? But at the end of the day, there's certain pieces to this puzzle that we've already filled in that we can say we're standing on solid ground. We know that there's connections to our microbiome. We know that there are certain things that activate the microbiome in a way that predisposes us to cancer, like processed meats, red meat. And we know that there's also the opposite. There are things that will protect us from cancer if we actually choose to engage in them. And that is a predominant plant-based diet.

Chris: There are two things I'd love for you to talk about. One is you said saturated fat is bad for your gut microbiome or whatever. And I know there are people thinking, "What about healthy fats? We're supposed to have healthy fats," because this is kind of a big fad in the health world that you need good fats. "You need healthy fats," right? So, there's a contingent of people, especially the people that are into like the ketogenic diet and paleo and things like that, that really have become obsessed with healthy fats. The second thing I'd love for you to talk about – and I'm just saying this now so hopefully neither one of us will forget to talk about it – is probiotics and probiotic supplementation. But, anyway, let's talk about the fats first.

Dr. B: Yeah. Well, I feel like when we talk about macros, there's always nuance that we should have. Right? In the sense that, I don't like it when people vilify carbs. Fiber is a carb. Right? But I'm open to saying, and I think we would all agree, refined carbohydrates aren't good for you. They're not healthy. Right? And when it comes to fat, I'm open to saying that there's such a thing as healthy fat. But we need to define that. And we also need to recognize that there's not this demand for you to be 70% fat. Because fat doesn't contain fiber. Right? So, people who are guzzling olive oil, that makes absolutely no sense to me. It makes absolutely no sense to me. You know what we're talking about is that in nutrition there are substitutions.

So, Chris, just to be clear. When I say that there are healthy fats, I'm talking about the fat from whole plant foods. Whole plant foods. I'm saying that there is value to the monounsaturated fats and polyunsaturated fats that you will find chia and flax have. By the way, people may not realize this. So, people get hyped up on omega-3s, healthy fats. There is no animal that creates omega-3s. It doesn't exist. There is no animal... Salmon don't create their own omega-3s. 100% of omega-3s come from plants 100%. It's just that the salmon happen to store it in their fat. So, you can get omega-3s from chia, flax, hemp. You can get them in walnuts. You can also get omega-3s from algae. That's where the salmon get it. And there's different types of omega-3s.

So, omega-3s are healthy fats. But the source should be a plant source. That's the origin of the oil. That's the origin of the origin of the omega-3. So, me personally, I love having my smoothie as often as possible with chia, flax, hemp. I throw them in there. And many times, walnuts too. The monounsaturated fats are something that we will get from our nuts, from our seeds, and from our avocado. We don't need saturated fat. There's no need for saturated fat. There's just no need for it. And we certainly don't need trans fats. So, I guess the point from my perspective is this... There is a place for nuts and seeds. There's a place for avocados. I am not a fan of coconut. Coconut is saturated fat.

I'm not a fan of oil because oil is 4,000 calories per pound. Whereas if that were greens, it would be 100 calories. You have 40 times more

calories per ounce oil compared to greens. And you have zero fiber in oil. Zero. If you're going to use oil, you should use it in moderation. You should really minimize it. And it should be something like extra virgin olive oil. But the idea that extra virgin olive oil is good for you... Chris, we said it before, it's all about substitutions. So, if you're replacing unhealthy vegetable oil with extra virgin olive oil, okay, you just upgraded it. If you're replacing butter with extra virgin olive oil, okay, you just upgraded it. But what if I take extra virgin olive oil and I just get rid of it? I use vegetable broth. That's probably an upgrade too.

So, from my perspective, I think that we are becoming excessively fixated on trying to get fats. And I think part of it is our sort of our addiction to these foods, to be honest with you. You know, we evolved to eat fat, sugar, and salt. We evolved to eat these things because we lived in famine. For 99% of human history we lived in famine. There was no supermarket. There was no organized agriculture. You lived off the land. You lived to survive. You just hoped you went long enough to have kids. That's what you lived for. And so, we evolved these things that enhanced our survival. Sugar, which is energy. Fat, which is energy. And salt, which you need to sustain life. We evolved a taste for these things because during that period of time, we needed them. But there's this idea called antagonistic pleiotropy, which basically means that the things that we evolved to enhance our survival at one point in human history turn out to be the things that bite us in the tail later on. And that's right now. Our love for salt, sugar, and fat is killing us.

Chris: And those are the elements of food that light up the pleasure centers in our brain.

Dr. B: Exactly.

Chris: And that's why we like sugar so much. And fat so much. And salt so much. Yeah, it makes a lot of sense, especially the way you explain it. We are a low oils household. So, we're not no oil. But we're just very conscientious that you just don't need very much oil to cook. And a lot of times you don't need it at all.

Dr. B: We're the same way, by the way. In our household.

Chris: Yeah. And so that's what I encourage folks to do. To really cut back on consuming excessive amounts of saturated fat. And the reality is, yeah, there's healthy fats. But you just don't need much. Your body doesn't need nearly as much. You don't need to be supplementing fat. You don't need to be eating tablespoons of coconut oil and stuff like, "Oh, I'm eating healthy fat," or whatever. Which people are doing.

Dr. B: There was one study where they took human beings and they varied the amount of fat in their diet, 40, 50, 60%. And it's critical because they maintained the same fiber for all of them. So, they went to great lengths

so that everyone got the same amount of fiber. So, they were really isolating the fat. 40 50, 60%. And what they saw was as they ramped up the fat in the diet, progressive harm on the microbiome. The microbiome doesn't thrive on fat. It thrives on fiber.

Chris: Yeah. And I love what you said earlier about the diversity. And I think this will probably be a light bulb for folks. Because when you eat a diet that's not diverse... And I can't help but think about an old buddy, Brandon, who was one of the pickiest eaters that I've ever met. Like all the guy would eat was like chicken and rice and potatoes. Like he wouldn't eat a vegetable. I was just like, "Dude. You're an adult. Eat some vegetables, man."

But anyway, you think about a lot of Americans who are just eating chicken, beef, pork. They're just eating animal protein and fat three times a day. They're eating maybe potatoes and some grains every day. And a very, very, very, very low amount of fruit or other vegetables, especially green leafy vegetables. And so, their microbiome is really comprised of bacteria that like meat and fat and sugar and not much else. Right? But when you eat this massive variety of fruits and vegetables, then you develop all these different types of bacteria. And you have this widely balanced, extremely diverse population. And they all keep each other in check. Right? And that's what we want.

Okay. So, this is the last question, unless I think of another one. Probiotics. So, I've been wrong about a lot of stuff. And that's part of education and learning. You learn things and then you learn that you were.

Dr. B: And that's actually okay. That's a great thing. That's a sign of a person who does not have an agenda.

Chris: I try really hard. I mean, I do have an agenda in the sense that I really want people to help people get well. I have that agenda.

Dr. B: That's a good agenda.

Chris: But yeah, you learn things and then you learn the things you learned were wrong. So, one of the things that I thought I knew was that probiotic supplements were really good for you. And I did take a ton of probiotic supplements early in my cancer journey because I was reading stuff and there were certain experts and people who were saying, "Oh, you've got to take probiotics, blah, blah, blah to have a healthy gut." Okay. Little did I know I was eating like the best diet ever for a healthy gut. I didn't need the probiotics. I was eating this incredibly diverse plant-based diet.

And let me throw this out there because we haven't touched on it, but I think you'll probably agree. I think it's really important to eat a variety of

raw and cooked vegetables, because raw vegetables do have live bacteria that you lose when you cook them. So, you kind of need both. And some people think that raw really is the best probiotic. But the point is, after some years I saw studies come out that were saying probiotics can actually be harmful and they can upset the balance of bacteria in the gut and throw it out of balance. What are your thoughts? Is there ever a time when you recommend probiotics for a patient?

Dr. B: There are some. So, I think that the main takeaway that I want people to understand is that the hype is outweighing the science when it comes to probiotics. What you're hearing is the marketing tools of the company who makes the probiotic that's trying to convince you that the foundation of gut health is a probiotic. That you can't imagine healthy gut without taking a probiotic. And I'm going to tell you right now, I could have probiotics for free. There's tons of companies that would send them to me. And I don't take them. Diet and lifestyle comes first. Prebiotics come second. I do think that there's a place for prebiotic support, prebiotic supplementation. But don't ever think that you can take a C- gut and turn it into an A+ with supplements. You can't. It has to be diet and lifestyle that really drive the equation.

Chris: That's it. So, I want to be respectful. Thank you. We've been talking for like an hour and a half.

Dr. B: I mean, I could keep going all day.

Chris: I know you could. I could too.

Dr. B: If you want to go another time, just let me know. I'll come and do it again.

Chris: We'll have to follow up because this has been awesome. Dr. Will, dude, you're amazing. Everybody, thanks for watching. Will's new book is *Fiber Fueled*. It's out now. And I want to encourage you to get it and read it. I mean, there's several hundred pages in the back of scientific references. There's a ton of recipes. I think he said 70 recipes in here. And then research that will blow your mind. I'm learning stuff that I'm like, "Whoa, this is amazing. I had no idea." And I've done a bunch of research on gut health and all this kind of stuff. And you went even further down the rabbit hole than me, which I just love. You know, I just love to learn new things. So, thank you so much for your time. I really appreciate it. Let's do it again. And yeah, man, keep up the great work.

Dr. B: I love it. I love it. I'm appreciative to come on your show. I mean, seriously. I've been really looking forward to it. And what I want to say to your listeners is that we've been in this time of misinformation and confusion. I mean, that's what makes it really hard. And there's a lot of noise. But there's truth within the noise. We just need to know how to find it. So, if you have enjoyed this episode and you believe in what we're

talking about, you should share it. You should tell people because that's how we elevate quality information and suppress the misinformation. And the same is true for my book. If you enjoy my book, tell a friend, tell a family member, whoever. Let them know that you found this book that's changed your life. The same is true for the *Chris Beat Cancer* book.

So, whatever it is, when you find high quality information, we need to get the word out. That's how we fight misinformation. And you guys, you can find me at theplantfedgut.com. By the way, Chris, I don't know if you knew this. I have a research guide on my website that I'm putting up. It'll be up by the time this podcast goes up. Not only am I giving people the 600 references completely for free –whether you buy my book or not, you can have the references. I want complete transparency. You can check me. Check me. Go ahead.

But also, I'm giving people a guide to clinical research – like research 101 for the person who's like, "I am so tired and confused of hearing different doctors say different things." Okay. Let me help you figure this out. Let me help you figure this out. I'm going to show you the way that I would recommend that you think about all this. And so, that's all for free on my website, theplantfedgut.com. I also have a COVID-19 guide. You can find me on Instagram and on Facebook @theguthealthMD. And once again, thank you for having me on. It's been great and I look forward to doing it again.

Chris: Dr. Will Bulsiewicz. Thank you. You're amazing. Again, theplantfedgut.com is your website and @theguthealthMD is your social media handle. The book is *Fiber Fueled*. Thanks for watching everybody. Please share this video. People in your life need to know this information. And you said we need to get to the truth. And the good news here is that the truth is simple. It really, really is simple. Lies are complicated. I say this all the time. Truth is simple. Lies are complicated. And the simple truth here is that plant foods are amazing for your body. They promote health and healing. They prevent disease. Eat a wide variety of fruits, vegetables, nuts, seeds, legumes, whole grains. It will do you good. Alright. How's that? Good close?

Dr. B: Sounds great.

Chris: Thanks, everybody. See you on the next one!

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