Short-Term Health Improvements on Low-Carb Diets

you'd get lower blood pressure, lower total cholesterol, lower triglycerides, lower A1C, lower fasting blood glucose, and you'd lose a lot of weight, okay?

But what's really important to understand is that those results are short results. Those results are likely to happen within the first six months, maybe 12 months or so.

But if you look at the data and you look at the scientific research, what you'll find is that people who experience positive benefit in the short term oftentimes If you extrapolate into the future, you go two years in the future, three years, sometimes even five years in the future, A1C values begin to rise once again, back up to the type 2 diabetes level of greater than 6.4%. Blood pressure tends to come back up.

LDL cholesterol is always high in that setting, and that's really not a good thing. This is Doctor Talks. Welcome to the Reversing Type 2 Diabetes Summit 2.0. We are here again with the fabulous, wonderful Cyrus Combata, head of the Mastering Diabetes Group and so many other great things.

And in today's episode, what we're really going to take a deep dive into is taking a peek at the issues with insulin, opportunities as well as missed opportunities with the GLP-1 drugs known as like ozempic and samaglitide and some other goodness.

We're really here to bust those myths and get people crystal clear. And I know Cyrus will tell us if we have words like postprandial, what it means. All right.

Thank you, Cyrus. Go ahead. Yeah. Thank you so much. I appreciate the invitation to be here today, Beverly. Absolutely. So tell us just a little bit about your background and then we're going to take it away.

For sure. Okay. So quick background here is I was diagnosed with three autoimmune conditions in the year 2002. So that was effectively call it 21 years ago.

I was at the end of college. I was a senior and I was just trying to graduate and move on with my life. I was studying mechanical engineering at the time.

And all of a sudden I got diagnosed with type one diabetes, Hashimoto's hypothyroidism and alopecia, which is basically, you know, total hair loss. And the doctors at the time could not explain exactly why I had developed three autoimmune conditions within a six month period.

Cyrus Combatau2019s Autoimmune Diagnosis and Diet Shift

And they kind of left me leaving the hospital saying like, hey, here's a book about carbohydrate counting and here's some insulin and here's some syringes and here's a blood glucose meter.

See you later. And I was like, wait, what is happening to me? This doesn't make any sense. You know, I've always been an athletic guy. I've always been normal weight, you know, and as a result of that, when I got diagnosed with type one diabetes in particular, I was just like scratching my head because I was like, I don't get it.

What am I missing? What did I do wrong? So that set me on a journey to try and figure out, to try and get an answer to that question. Did I cause this?

Did something else cause this? Is it a virus? Is it an environmental chemical? Is it something in my genetics? Is it some combination of all that together?

I don't know. So the first year, I ended up transitioning to a low carbohydrate diet because that's what the doctors told me was the right thing to do.

And I didn't know anything about human biology at that point. So I thought, okay, I'm just gonna listen to what these, you know, authoritative figures have to tell me.

And I ate a low carbohydrate diet that had somewhere about, you know, 75, maybe a maximum of 125 grams of carbohydrate per day, which is not a ketogenic diet, just for clarity.

This is like a low carbohydrate, general low carbohydrate diet. And the promise was that it would keep my glucose down or would keep my glucose controlled and it would keep my insulin use from increasing over the course of time.

Neither one of those two happened. My glucose was very erratic. On any given day, my glucose could be anywhere as low as like a 40 or it could be as high as a 400. And it was just kind of like bouncing all over the place and I didn't have any control.

over what the number was gonna be at any given moment in time. I was a good boy. I was a good patient. I was exercising frequently. I was drinking lots of water.

I was keeping my stress low. I was—I got rid of alcohol consumption and I was eating a low carbohydrate diet exactly like they described but yet my insulin use was also creeping up.

It had doubled in the first year and my glucose was all over the place and I knew that this just wasn't the right thing for me. So I switched over to eating a plant-based diet because a friend of mine nudged me in that direction and said, hey, this might be a good option for you.

So I switched over to eating a plant-based diet under the supervision of a gentleman named Dr. Doug Graham. And he went on to write a book called the 80-10-10 diet, which is basically a diet that teaches people how to use a raw food approach to, you know, combating chronic diseases and just living their best life.

So I, under his supervision, I ended up making this transition to eating a fully plant-based diet. And my Lord, in the first week of making that transition.

My glucose fell like a rock and rather than being very erratic and high most of the day, it came down and it was very low and it was very consistent. In addition to that, because my glucose was so low and because it was so predictable, I was able to reduce my use of insulin and my insulin had crept up to about 45 units per day and it went from 45 down to 42, down to 37, down to 31. And before I knew it, I was down at 23 units per day.

But here's the kicker. I was doing it while consuming 600 to 700 grams of carbohydrate per day. So the reason why this is important is because the narrative in the world of diabetes is that carbohydrates cause you to use more insulin.

Carbohydrates cause insulin resistance. Carbohydrates cause your pancreas to work harder. Carbohydrates make your pancreas secrete more insulin. But what I was doing was eating not 125 grams of carbohydrate per day per 600 to 700 grams of carbohydrate per day.

And yet, despite that, my insulin use went down, got cut down by about a half. So I knew that there was something fascinating that was happening behind the scenes and I just couldn't explain it using words.

So long story short, I ended up going back to school to go get a PhD in nutritional biochemistry because I was thirsty for knowledge. I wanted to understand what was happening inside of this biological machine.

How could I explain what I was just experiencing? And then in addition to that, how could I extrapolate that to be able to help other people living with type 1, pre-diabetes, type 2 diabetes, gestational and beyond?

And that led to the development of Mastering Diabetes with my partner, Robbie Barbero, who also has type 1. And the two of us have created a platform that teaches people how to transition towards a plant-focused diet.

And in the process of doing so, they can significantly improve their health while combating the one underlying condition that seems to be the topic of every YouTube video in the world right now, which is insulin resistance.

So we've developed a method that can not just manage insulin resistance, but actually reverse it at its core. And as a result of that, we have people all across the world of all walks of life that are lowering their glucose, lowering their body weight and feeling like a million bucks.

And it's just a fun, it's a fun thing to do. Absolutely. It's really great to be able to help others and help them really unravel the things that are mysterious.

And so it sounds like a key part of the through line for you, Cyrus, is that you got curious. You got to work. You had an open mind and you were finding out what was going to work for you for a bio individual response.

And then you were able to scale it because there's plenty of other people for whom that blueprint is effective and they will need support and guidance and help along the way.

Absolutely. One of the things I've always been just kind of A mixture of annoyed and puzzled by is that often in the world of medicine and health, people do get into these narratives of it has to be one way, as if nutrition is about one size fits all.

Why Plant-Based Eating Lowered Insulin Needs

And I got to say, in 30 plus years of experience, I have not seen that be true. And I really appreciate that you unpack both your own journey, what's happened for your community, and the keys to the science behind all of this so that it actually makes sense and is repeatable.

You got it, you nailed it on the head. I mean, if you go into the scientific world, you know, you've been involved in science for a long period of time and you've studied it, you know, for endless hours.

Similarly, you know, I did the same thing when I was doing my PhD. And one of the things you find out is that you can't build a scientific story off of like one observation or off of one anecdotal experience, right?

You can't build it off of two, you can't build it off of five. That might be like a hypothesis generating thing, but then you have to go and test it and make sure that it applies to larger populations in many different circumstances.

Long story short is that there's an overwhelming amount of scientific data that demonstrates that just what you're saying, number one, there is a strong bio-individuality amongst people.

People of different shapes and colors and sizes and disease backgrounds may not have the exact same response to the same food on their plate. And that's okay.

Actually, that's part of the process is trying to figure out what's ideal for you. But we also have seen that the research has demonstrated that eating more plants, you know, eating a stronger, you know, a diet that has more plant-based focus tends to be a very powerful solution for a wide majority of all people living with diabetes, right?

Is it the number one and the only solution for anybody living with diabetes? No, that's not the case. But the truth is that. It works for an overwhelming majority of people and that unto itself is reason enough to give it a lot of attention.

Absolutely. You know, you got to do what's work, what works, what's effective. You know, if you're an outcomes-based, results-based person, whether you're the one living with the illness or you're someone who's an advocate or supporter of it, or if you're here on this summit because you're a fellow health professional, right?

Because we know about 80% of our audience is the general public, about 20% is health professionals. Whatever your reason for being here, please understand it is critical to meet people where they are and help them get to where they need to go.

That is the journey. You got it. You nailed it. All right, perfect. So as we're talking here on the first part of our interview about insulin resistance, what are some of the myths along the way that people really don't get?

Because there's a lot of misinformation out there right now, and it almost makes it think like if you just think good thoughts and sprinkle glitter on yourself, your insulin resistance will go away.

You and I both know that's not that simple. Right. You're going to have to use a lot of glitter. That's the truth. And some unicorns, right? And rainbows.

They help. They help. Okay, so the common narrative in the world of diabetes is that a low carbohydrate diet is the solution. Regardless of the type of diabetes you live in, whether it's type one insulin dependent or whether it's pre-diabetes or type two diabetes, carbohydrates are the enemy.

Carbs are bad for you. Carbs will make you fat. Carbs will make your pancreas work harder. Carbs will make you secrete more insulin. Carbs will make you more insulin resistant.

You see this everywhere you go. Just go into Google, go into Instagram, go into YouTube, you name it, and just type in like diet for diabetes and boom, you'll see this anti-carbohydrate propaganda.

And I do use the word propaganda in particular because it is not always factually based. You see this all over the frequent place, right? And the reason that it exists in the first place is because when you lower your carbohydrate intake, many things, many positive things can happen in the short term, okay?

So what people will experience is that they'll say, you know what, I'm eating a low carb diet, right? And in reality, what they've done is they've actually cut out most of the processed food in their diet.

So when people say low carb diet, what they really should be saying is I'm eating a low refined carbohydrate diet, which means low, cookies, crackers, chips, pastas, sodas, pretzels, donuts, and beyond, right?

If you get rid of most of that stuff, well then, it's not a surprise that your health is gonna improve. It's not a surprise that you're gonna lose weight.

It's not a surprise that your glucose will come down, your A1C will come down, your blood pressure will come down. Your total cholesterol will come down and triglycerides will come down.

Okay. So that is a very good thing. So people will make this change and they'll see all these positive benefits and they'll be like, Oh my God, a low carbohydrate diet is the solution.

Right. But what they are sort of, I think what this world of low carbohydrate diet is doing, unfortunately, is it makes people believe that all carbohydrates are the same.

All carbohydrate rich food is created equal, right? And you see this all over the place where people will literally say, don't eat bananas because bananas contain sugar.

And sugar is bad for you and sugar will make your blood sugar go up. It's a very simplistic argument, but it has no factual basis. Okay. People will always confuse a whole carbohydrate rich food like fruits, starchy vegetables, like potatoes or squashes, whole grains like quinoa and barley and Pharaoh.

And they'll basically say, those are also bad for you because fruits contain sugar and potatoes contain starch, which breaks down into sugar. And so this term sugar just gets planted in people's head and people go, anything that's carbohydrate rich is bad for me because carbs equal sugar.

Okay. The problem with that is that it's factually incorrect, okay? The refined carbohydrates like we talked about earlier, the cookies, crackers, chips, pastas, bread, sodas, all that stuff, get it out of your diet, okay?

Regardless of who you talk to, whether it's a plant strong individual like myself or whether it's a ketogenic expert or whether it's an paleo expert or a low carbohydrate diet, every single one of us is saying the same thing.

Get those processed foods out of your diet because they have no place. It's just literally dietary napalm. Just be done with them, right? Okay. But the confusion is all about whether or not eating fruits and potatoes and whole grains is healthy or unhealthy.

Bio-Individuality and the Science Behind Nutrition

Right. And the carnivore and low carbohydrate world wants you to believe that they're unhealthy, but the plant-based world knows that they are actually healthy for you now.

Why is that the case? The reason that's the case is because whole carbohydrate-rich foods, which are foods that are grown in nature, that either come from a bush or a tree or the ground, and are either unprocessed, meaning you can just pick them off of a plant and eat them, or you can minimally process by picking them off of a plant and maybe boiling them or heat treating them in some way.

You can still eat it in its whole state without having to refine it and separate it into individual parts. When you consume those foods, What the research has shown over and over and over and over and over again is that those foods are beneficial for human health.

They're beneficial for longevity. They're beneficial for chronic disease reduction, whether it's diabetes or heart disease or cancer or autoimmune diseases and beyond.

And the reason for that is because whole carbohydrate rich foods contain many classes of nutrients that go well beyond just the carbohydrate world. They contain carbohydrate and fat and protein, which are your three macronutrients.

In addition to that, they also contain vitamins and minerals and fiber and water and antioxidants and phytochemicals. There are literally nine classes of nutrients that are present in every single whole food that you can think of.

So just think in your head, give me five examples of whole foods. I'll give you a banana, I'll give you chickpeas, I'll give you purple potatoes, I'll give you quinoa, and I will also give you black beans.

Every single one of those, no matter what other whole food that you can think of, whether it's some obscure berry that grows in the middle of the Amazon rainforest, or whether it's wheat that comes from a large industrial farm in the middle of Ohio.

Regardless of what it is, every single whole food contains carbohydrate, fat and protein, plus vitamins, minerals, fiber, water, antioxidants and phytochemicals.

It's the presence of all nine of these macro and micronutrients that does the nutritional magic. The macronutrients are what gives you energy. That energy can be translated into ATP that's useful for your brain and for your muscles and for your heart and your blood vessels and your liver and your kidney and beyond.

But the micronutrients are the disease-fighting powerhouses that help, number one, reduce your cholesterol, reduce your blood pressure, create elasticity inside of blood vessels, prevent against platelet aggregation, their vasodilators, and beyond.

All of these disease-fighting micronutrients, they're very important and they're critical for human health, both in the short term and the long term. And when you eat a low carbohydrate diet, simply thinking that eliminating all

carbohydrate rich anything from your diet is the solution, what you inadvertently do is you also eliminate the micronutrients.

So it ends up becoming a micronutrient deficient diet, which in the long term is actually going to cause significant organ damage to your brain, to your eyes, to your liver and your kidney and your heart and your blood vessels and your muscle tissue and beyond.

So I want people to really understand that it's not just about the carbs. We have to get beyond the carb and understand that there's two different types of carbohydrate and that the whole carbohydrate comes prepackaged with a whole bunch of micronutrients.

And those micronutrients are the keys to understanding how to live an optimal life long into the future. Well said, I agree with you 100% about this. So another way, would you say, to look at this is with the two kinds of carbs, right?

The beneficial, health-preserving carbs and the ones that are the thief of health, in my opinion, the really highly refined, highly processed stuff. Those really are nutrient deficient and set people up for a whole host of problems, including blood sugar problems.

100%. Blood glucose dysregulation is just one of many things that can happen when you're eating a micronutrient deficient diet, right? Your cholesterol is likely to go up, your blood pressure is likely to go up, your blood glucose is likely to go up, cholesterol deposition inside of blood vessels is likely to go up, atherosclerosis is likely to go up.

You increase your risk for dementia and Alzheimer's disease and fatty liver disease and chronic kidney disease and the list goes on. So, you're absolutely right.

You nailed it. Cool, so we're all gonna be advocates of whole foods, real foods, nutrient-dense options. And in that, when we're talking about insulin resistance, it's been so interesting to see over this last, I'd say, seven to nine years, so much more emphasis on demonizing food groups and foods.

And I don't quite get what that's about, because obviously we need to eat, we need to nourish ourselves. It's fundamental. Before we're even born, when we're a fetus in the womb and we're attached to a placenta, we're being nourished.

Why would that end when we leave our mother's body, you know? What is the journey that people go through where they need to understand where there might be some speed bumps or cautionary moments where people try and tell you one thing but the other thing is actually what's accurate and what's their lived experience you know?

Yeah for sure for sure I mean it's all over the place like in today's world There's so much misinformation, regardless of where you go, right? Any social media platform, Google WebMD, it's just like, it's a quagmire.

It's really hard to understand what is true and how to separate fact from fiction in today's world, right? And I've seen, you know, during the COVID pandemic, I mean, it got real bad.

And all of a sudden there was so much information specifically about COVID and what is it and how can it be treated and beyond that just got to a point where, you know, personally, I had to turn off the internet and I was like, I literally don't even know what to believe anymore.

This is weird, right? I feel like I'm living in some like dystopian, you know, post, you know, like Armageddon world where I'm like, I literally don't even know what I'm supposed to believe.

So, which is kind of strange. Long story short, it can be very easy to fall prey to like, you know, misinformation or I should say unscientific information.

That's really what it boils down to. I'm affirming unscientific. I agree. Yeah, so unscientific. So, The people when we refer to scientific information where we're literally referring to like all of the papers and scientific publications that

have been created since the beginning of time that are put into this thing called PubMed.

And PubMed is basically a search engine. It's the Google search engine of scientific papers, right? Most people don't spend any time searching PubMed because why would you?

It's a bunch of esoteric information. It's hard to understand. It's hard to read. And it's quite honestly, it's just freaking boring. But people like you and I who are super nerds and doctors and researchers and beyond love going into PubMed because that's our source of truth.

Now even within PubMed, there's a lot of conflict and you can look up a term like insulin resistance to try and figure out what causes it and even within the scientific papers themselves, There's a lot of confusion.

So then it becomes, well, now, wait a minute, even the science is messed up and the science is confusing. So how is the general public supposed to understand what's the right thing to do?

Right. So what I would say is that going back to what you were saying, right? What we don't want to do is demonize any one particular food group or any one particular nutrient.

Right. And that's all that's what happens a lot on social media where people will tell you that fiber is toxic for you. Don't eat fiber. Don't eat carbs.

Carbs are bad for you. Don't eat fat. All fats bad for you. Right. You know, eat as much protein as you possibly can. Protein is great. Right. And you just see these like these these like these sound bites which make it seem believable.

But in reality, it's all just kind of like a fragmented picture of a very complex master puzzle. Right. So I've spent a lot of time thinking and, you know, when we wrote the book, Mastering Diabetes, Robbie and I had to spend thousands of hours trying to figure out like, how are we going to craft an argument that's really going to help people understand that this complex world of nutrition is actually not that complex, but you have to apply some very fundamental principles first.

And one of those fundamental principles. No, I was going to say you're applying those fundamental principles first and consistently. And consistently, exactly right.

So what you have to do is basically ask yourself some pretty darn basic and general questions first and then build upon those questions to become more complicated.

And one of the first basic questions you can ask yourself is what is the ideal macronutrient ratio for human health?

Whole Foods vs Refined Carbs and Insulin Resistance

Is there a single macronutrient ratio which is optimal for human health, right? And what I mean by macronutrient ratio, I mean is what is the distribution of carbohydrate versus fat versus protein that has been consistently shown to lead to positive health outcomes?

Is it 33% carbohydrate, 33% protein, 33% fat? Is it 20% carbohydrate and 60% fat and 20% protein? Yada yada yada, right? So we've spent a lot of time trying to figure out the answer to that.

And here's the answer. Ready? There is no answer, right? The answer is that there is no answer, but the answer is that. Again, if you look at their specific types of studies that are called randomized control trials, RCTs, and these are considered like the gold standard in the world of nutritional research because they follow a design which enables you to split subjects into two different groups and randomize them so they don't know exactly which group that they're going into.

And then you feed group one a specific protocol, you feed group two a specific protocol, and then you measure the

differences over the course of time.

And that's how you're supposed to do very good scientific research. Then you can get one step even further than that and you can say, all right, well, let's perform a meta analysis of randomized control trials, which is a way of saying, all right, we have these 50 randomized control trials in front of us and each one of them has a slightly different conclusion.

Well, let's pull all the data together into one giant conglomerate of data and then let's try and figure out what do all of these papers say that, you know, does it have a coherent story?

And that's when you get to another level of trying to understand what does the overall research have to say about a given topic. And when you look at the meta-analyses and you look at the systematic reviews of many randomized control trials, there's a common theme that seems to be bubbling to the surface over the course of the last 10 or 15 years.

And that common theme is exactly what I said earlier, which is more plant-based material in your diet can lead to more positive health outcomes. Do you have to eat a 100% strictly plant-based diet?

No, absolutely not. If you want to, you can. But if you were to incorporate a larger amount of plant material into your diet in substitution for number one, plant processed foods and number two, animal-based foods, then you're doing yourself a huge service from a cardio-metabolic perspective.

Cardiovascularly, you're lowering your risk for heart disease. And number two, all metabolic function, whether that's inside of your gut or inside of your liver, your kidney, your brain, you name it, all of that tends to improve.

So if you were to ask me, well, fine Cyrus, what's the ideal macronutrient ratio? My answer to you is somewhere between 70% carbohydrate, 15% fat, 15% protein, somewhere in that range between 70, 15, 15. and 80-10-10, okay?

In both of those scenarios, we're talking about a overwhelmingly large component of the diet that comes from carbohydrate-rich foods only from whole sources, and the remainder is split relatively evenly between fat and protein.

So again, it's 7% carbohydrate and then 15 fat, 15 protein, or 80% carbohydrate, 10 fat, 10 protein, okay? So if you move in that general direction, then what you're likely to find is that number one, your total fat intake has come down to a physiologically relevant amount, a physiologically normal amount.

The standard American diet contains on average 42 to 45% fat, which is technically speaking a very high fat intake. and a decent amount of that fat can come from saturated fat.

Now saturated fat is, if I had to like, you know, do like a rank ordered list of like worst offenders to best offenders, right? Saturated fat would be my number one worst offender, right?

And again, I'm not trying to say all saturated fat is bad for you, but saturated fat seems to be the one type of molecule, the one class of molecule that leads to more, you know, metabolic dysfunction than any other molecule, okay?

So a high fat diet Also, a high saturated fat diet can cause many problems from a cardiovascular perspective and from an insulin resistance perspective.

Okay. So if you move from a diet that contains approximately 42 to 45% of your of your diet in fat, and you bring it down to somewhere between 10 and 15% right there that one change.

can make mass massive positive influences in your ability to utilize glucose as a fuel. Okay. And glucose is the molecule that comes from the carbohydrate world.

Let me say this one other way. Fatty acids and carbohydrates compete for world domination. The two of them do not like each other. The two of them do not like to coexist.

And when you consume a diet that is high in fat and a diet that is high in carbohydrate at the same time, many problems ensue. So, if you choose to follow my recommendations, what I suggest you do is lower your fat intake to between 10 and 15% of all calories and raise your whole carbohydrate intake.

And in that world, what that means is that the small amount of fat that you are consuming does not interfere with your ability to metabolize carbohydrate from whole foods.

And that is a good thing. That means you can eat whole foods. You can get a lot of carbohydrate energy. You can efficiently process that carbohydrate energy.

And that leads to the usage of glucose as a fuel. And that leads to optimal insulin signaling inside of your liver and inside of your muscle, exactly the way human beings were designed.

In fact, exactly the way most mammals were designed, truth be told. Okay. It gives you that metabolic flexibility. It's important. Exactly right. Exactly right.

Now, so I just described a situation where you go low fat but high your carbohydrate. And again, the fat does not interfere with carbohydrate utilization and carbohydrate metabolism.

Okay. Now, if we were to go and flip it the exact opposite direction and say, what if you decided to eat a very high fat diet, like 70 or 80% of your calories as fat as you would in the low carbohydrate world or the ketogenic world, and then bring your carbohydrate intake down to something like 10 to 15 to 20%. What would happen in that scenario?

Well, in that scenario, what you're likely to find is exactly what the rest of the low carbohydrate world finds. that you get some very positive benefits that would come along for the ride.

Okay. You'd get lower blood pressure, lower total cholesterol, lower triglycerides, lower A1C, lower fasting blood glucose, and you'd lose a lot of weight.

Okay. But what's really important to understand is that those results are short results. Those results are likely to happen within the first six months, maybe 12 months or so.

But if you look at the data and you look at the scientific research, what you'll find is that people who experience positive benefit in the short term, oftentimes, if you extrapolate into the future, you go two years in the future, three years, sometimes even five years in the future, A1C values begin to rise once again, back up to the type 2 diabetes level of greater than 6.4%. blood pressure tends to come back up.

LDL cholesterol is always high in that setting. And that's really not a good thing because your heart health is significantly compromised. Okay. So it's really important to understand that, that if you were to play the game where you're doing high fat, low carbohydrate, you absolutely will see positive impact in the short term, but there's a strong likelihood that over the course of a year to two years to three years, that you're actually increasing the amount of insulin resistance in your liver and muscle so much that you're creating other problems and it's going to come back to bite you in the future.

So, okay, Cyrus, so now as we continue this interview, let's talk about the Ozempix, the Angeros, the Wigovis, the GLP-1 drugs and the opportunity that they present for people.

Okay, phenomenal.

Low-Fat, High-Carb Nutrition and Metabolic Flexibility

So, there's a whole class of drugs that are called GLP-1 receptor agonists, and that's just a long-winded, super nerdy scientific way of saying drugs that will help you do two primary things.

Number one, lower your blood glucose. and number two, lose weight rapidly, okay? GLP-1 receptor agonists were originally developed by the pharmaceutical industry to help combat type 2 diabetes, to help lower blood glucose in people living with type 2 diabetes.

But what they found out was that when you interfere with the GLP-1 signaling pathway, you can end up generating a drug that makes rapid weight loss happen.

And then as a result of that, the GLP-1 receptor agonists now are more popular in the weight loss world than they are in the diabetes world. So there's people all over the place who are non, they do not have diabetes in any way, shape or form, but their doctors are prescribing them.

GLP-1 receptor agonists named Ozempic or Wegovi or Mungiro, and they are using these medications to lose weight. And guess what? It works like wildfire.

So I'm going to share my screen and show you a couple of different interesting things that can happen when you start using a GLP-1 receptor agonist. This is a study that was published in the New England Journal of Medicine.

And it demonstrates what can happen to people who use a GLP-1 receptor agonist over the course of a 68 week period, which is. What is that? Just over a year, call it a year and a quarter.

So what that means is that these individuals, people from the study were placed into one of two groups. Group number one was fed a placebo pill. So they were told that they were taking some type of medication, but they didn't know what it was.

And then the group number two was actually given what's called semaglutide. And semaglutide is the generic version of Ozempic and Wegevy. Okay. So group number two was given semaglutide.

And again, they were not told what they were being fed, but they were basically, you know, both groups went into this blindly. So the first group over the course of that 68 week period ended up losing approximately 2% of their body weight over about a course of a year and a half or a year and a quarter.

Okay. versus the group that was fed semaglutide, they ended up losing, as you can see on this graph, 15% of their body weight over the course of a 68 week period.

A 15% body weight drop is a massive, massive change. And this is what makes this drug so attractive. for doctors and so attractive for people who are overweight because as long as you're taking it, you're likely to lose a significant amount of weight.

We're not talking just a couple of kilograms here and there. We're talking about 15% of your total body weight, right? Now. This is given as a once weekly injection.

And what that means is that you are prescribed a medication that you have to inject and the side effects of these injections can mount up over the course of time.

And this is what makes taking these drugs relatively uncomfortable. You can see on the screen here. that the most common side effects of Ozempic include a lot of GI dysfunction because GLP-1 is a hormone that is secreted inside of your digestive system.

So these drugs intercept and scramble the message that comes from GLP-1, which then causes your brain to interpret information in a different way. And as a result of that, a lot of the side effects happen inside of your digestive tract because that's where GLP-1 functions.

And these these side effects includes nausea, abdominal pain, constipation, diarrhea, and vomiting. Okay, if you know somebody who has taken either Ozempic or Wegovia or Manjaro, just go ask them, say, Hey, were you nauseous?

Did you vomit? What happened to your appetite? Did you get any like GI dysfunction? And most people will tell you, oh yeah, that was real uncomfortable.

It worked. My appetite just literally disappeared, but it did not feel good. And I, you know, I didn't appreciate those side effects. Okay, so the reason that these these side effects are happening again is because GLP one is is a hormone that is secreted by, you know, your your small intestine, but the GLP one goes in signals to your brain.

Okay. And your brain is really where the bulk of the magic happens. So. If you can stretch your small intestine and stretch it to make it think that there's food inside of it, which is exactly what these drugs do, then what's going to happen is that your small intestine is going to pick up a phone and going to call your brain via a neurological pathway and say, hey, hypothalamus, can you not be as hungry?

And if you're not as hungry, then you're going to take on less food and then you're going to become, you're going to go into a negative calorie balance and lose weight.

So that's what happens is that these drugs literally make your digestive tract think that there is food inside of it when in reality there is nothing.

And as a result of that, your brain says, oh, wait a minute, let me shut off my hunger signal. And then you are not hungry. You don't eat food. You begin to lose weight.

That is the, that is the primary mechanism by which it works. And it is very, very effective. Okay. There was another trial that's called the step four trial that was published in 2021. And in this trial, they basically took individuals and they, they did something very interesting with them.

They were trying to ask the question. What happens if you stop taking semaglutide? after taking it for 20 weeks. Does the weight loss that you experience while taking it, does it stay or does it go away once you stop using it?

So what they did was they took individuals, they randomized them into one of two groups.

GLP-1 Drugs, Weight Loss, and Side Effects

Group number one was fed or was given semaglutide for 20 weeks, and then they continued to give them semaglutide for the remainder of the time up to week 68.

The second group, which is the placebo group, was also given semaglutide for the first 20 weeks, and then they discontinued semaglutide from weeks 20 to 68.

So effectively, both groups got it for 20 weeks, and then group one continued, group one discontinued. And what they found was that those that did continue ended up losing another 8% of their body weight after that first 20 week marker.

And those that discontinued ended up gaining 7% of their body weight back. So the actual difference between those two groups at the end of 68 weeks means that there was about a 15 percentage point difference.

between whether or not you decided to keep using it or not using it. So why is this important? Well, I'll tell you why, because this drug or these drugs only work when you use them.

Okay. So if you decide that you want to start using one of these medications, but yet as Beverly States, you don't make lifestyle modifications simultaneously, you are not increasing your intake of plant-based foods, reducing your intake of processed foods, reducing your intake of animal-based foods, reducing your intake of saturated fat,

increasing your energy expenditure via exercise, hydrating yourself, living a lower stress lifestyle, getting significant amount of sleep and applying all the lifestyle principles that we know to work.

If you're not doing that in the background and literally you're just taking an injection and you're saying, I'm just gonna let this injection do all the hard work for me, well, guess what?

When you decide that paying $900 a month for that injection is no longer worth it, your weight's going to skyrocket. You're going to go right back to where you started or more.

But if you use it as a temporary stop gap to help start the weight loss process and then start making lifestyle change after lifestyle change after lifestyle change, then when you decide that you're going to stop taking the medication, the weight loss can persist into the future.

That's the winning ticket. You know, I always feel that these kind of medications buy people time. I think it's beautiful that it turns off that food noise that some people have.

It just obsessively drives them to eat, eat, eat, even though they don't even want to. They're still doing it. And anything that helps people to be healthier, I'm all for it.

But I know that you still gotta do the lifestyle side. And I really wanna see that message get out there. I think it is unfair to tell people, hey, take this injection, it's gonna solve all your problems.

And then just like you said, Cyrus, the second they discontinue that injection for whatever reason, they don't have the money, they decide it's not worth it, they're not, the side effects become overwhelming, whatever it might be.

they're back where they were and like, okay, now what, right? So the time you may have bought yourself to make those lifestyle changes, it's a missed opportunity for real healing.

So I feel like it's part of the conversation. We all know these drugs are relatively new and I'm hopeful, hopeful, hopeful that Our fellow health professionals will really join in on making sure people get fully supported on what they need to do on the lifestyle side so that people can continue to be successful with these things because a lot of the people who turn to these class of drugs never got full lifestyle support to begin with.

There's a huge problem with doctors are not trained to teach their patients how to adopt lifestyle changes. Doctors are basically given instructions on how to prescribe them medications.

And so they use that as their first line of defense rather than teaching them how to apply lifestyle principles that have plenty of research and evidence to demonstrate that they're very powerful.

So if we can get to a point where our medical professionals have more knowledge and have better tools, we'll be in a much better place as a society and as a country.

Agreed. Agreed. Right now we've got pockets of people where, you know, they might be a naturopathic doctor like myself. They could be functional medicine doctors, et cetera, who maybe really, really understand this deeply and support people, but there's nowhere near enough of us.

We need the conventional medical world to join us here in order to make that difference for most people, because that's what people typically have more access to.

Couldn't agree with you more. Couldn't agree with you more. Okay, great. All right, so as we go to wrap this up, do you have any parting thoughts to share with people that help maybe give them a little goose to get going?

Yeah, for sure. Some people need that encouragement. They need the inspiration. Yeah, absolutely. You know, it's funny. I was just talking with a gentleman yesterday that I met for the first time.

And as we were sitting down to eat some food in a group, he mentioned that he's living with type 2 diabetes. And my wife and I turned to him and we're like, really?

How long have you been living with type 2 diabetes for? We got really curious and started to understand, well, what do you eat and do you move your body and you name it.

And he basically painted the perfect picture for type 2 diabetes. He's like, I don't really exercise because it hurts. I'm too heavy right now. And, you know, I used to be 275 pounds, now I'm 233 pounds.

It's, I want to be able to exercise, but I just can't do it right now. It's just too uncomfortable. And I said, well, what do you eat for breakfast? He goes, well, I'm eating, you know, a ham and cheese sandwich for breakfast.

Sometimes I eat some eggs and then, you know, I might have a couple of fruits later, but then, you know, I'll have some chicken or some tacos for dinner.

And I was like, okay, you just literally described the perfect, the perfect recipe for type two diabetes. Literally the perfect recipe that an even more perfect recipe would be that you're consuming a lot of alcohol, which he didn't say anything about.

Okay, so we then went down the path of trying to educate him and explain to him why eating a more plant-strong diet, why eating, you know, a lower fat diet was going to make a positive impact.

And the light bulbs in his brain just went off and he was like, wait, what? What are you talking about? What about this? And what about this? And what about this?

He got really curious and started to ask the right questions. And within the course of a 30 minute conversation with him, he was completely transformed from the inside out.

He's like, hold on, hold on. Let me take a picture with you. This is my before picture starting right now. I'm starting on this and I'm going to make it happen.

And trust me, two months into the future, you're not even going to recognize me anymore. And I was like, wow. The light bulb in his head just turned on and he now has knowledge to give him the nudge to start making changes for himself.

Because I can't do it for him and neither can my wife, but he's going to have to do it for himself. And it's that exact same idea that everybody has within them the power to succeed.

Every single person. You just have to decide whether or not you care enough. Do you care enough about yourself? Do you care enough about the people that you live with?

Do you care enough about your friends, your family, to be able to be here on this planet for a long period of time and have exceptional health into the future?

If you do, then you're going to do whatever you can to live an incredible life and do whatever you can to try and get your health under control. And my suggestion for you would be if you believe in it and if you believe that you're good enough, which honestly, I believe that you're good enough, Then I would strongly recommend taking this information from this summit and from the plant-based world in general and incorporating it into your lifestyle piece by piece by piece.

It is not a sprint.

Lifestyle Change, Motivation, and Where to Learn More

It is a marathon. And if you start to incorporate tiny little pieces over the course of time, what you are likely to find is

that so many things about you change.

Your glucose will come down. Your blood pressure will come down. Your cholesterol will come down. You start to lose weight. Great. But in addition to that, your thought processes will change.

You'll become a happier person. Literally, you will have a happier brain. Your digestive process will become better. Your skin will become clearer. You'll have more energy.

You'll sleep better. You'll have better interpersonal relationships with friends in your life and with family members. Everything about you will change because you are improving from the inside out.

So if you resonate with that message and you're sitting there thinking to yourself like, man, I really, I gotta get started. I know I should, I should, I should, I should do this, I should do this.

There are no shoulds in life. Stop saying the word should. I'm going to do it. Just put it into play and start making tiny little microscopic changes and compound them all on themselves over the course of time and just watch as you completely transform from the inside out.

But you have to trust the process. If you can trust the process, I guarantee you it's going to work. Bravo. Way to bring it home. All right. So as we wrap up this interview, please tell us, Cyrus, where can people connect with you if they want to learn more?

Okay. So if you want to connect with us, just go to on any platform, just look up the words Mastering Diabetes, Instagram, TikTok, Facebook, YouTube, podcast, website, MasteringDiabetes.org or type Mastering Diabetes in any one of those platforms and you'll see us.

We are producing lots of content all day long, every single day. And if anything I've said, even one tiny microscopic little thing that I said resonated with you.

Go learn more information and get involved. We have a coaching program. Our coaching program has touched the lives of thousands of people, continues to transform lives every single day.

And the stories that I read that come out of this program are literally, they bring me to tears. Literally bring me to tears where people are transforming from the inside out and getting a new lease on life.

So if you want a new lease on life, if you want to feel your best, if you want to look your best and you really want to transform yourself from the inside out.

You got the power. You got the tools. You just got to get started and I guarantee you it's going to work. Absolutely. Live long and live well. You address these root causes and it makes it possible for people.

They can unlock their own code and enjoy the health that really everyone deserves. We just need support and we need to know how. You got it. You nailed it.

All right, beautiful. Thank you so much for being a partner with me here on the summit. Love always interviewing you and the information and energy that you bring and the lived experiences makes us ever so real.

So friends, please share this summit with anyone that you know who either has type 2 diabetes or pre-diabetes, any kind of blood sugar dysregulation. or people who work with them as health professionals and people who advocate for them.

That can be family members, neighbors, colleagues, friends, whatever. People's emotional and social world matters. Please share this so we can reach as many people as possible.

I really still have that goal and I'm getting closer to helping 3 million people or more around the world get a hold of

this blood sugar issue and make it different and better for themselves going forward.

Thank you for tuning in. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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