Introduction and Guest Background

For this DrTalks, I have a fantastic guest. We are going to be talking about insulin resistance. And how it happens. What it means. Talk about some solutions, including plant based diets.

So thank you so much for our guest for joining me. This is Dr. Shayla Toombs-Withers and Dr. Shayla Toombs Withers is a family physician like me. She is the founder of the Essence of Help, a wellness clinic and coaching in Chattanooga, Tennessee.

And thank you so much for joining us. How did you get involved in the field of like, metabolic health, insulin resistance? How did you find your way to that?

Yeah, thanks for having me. I'm excited to to chat about this topic. Yeah. You know, so I always tell people I am a southern girl. I'm originally from Georgia, born and raised and just growing up on that traditional kind of southern diet.

So food, you know, like my grandmother loved to cook. And so just seeing these health conditions, even within my family, these metabolic type of conditions, things like, you know, diabetes and metabolic syndrome in these conditions, and as I grew older, the more I learned, even within my own health, about dietary changes and how this impacted my own health, it just became more and more intriguing.

So I started doing more reading. But, you know, medical school, finished, family medicine residency. And then I heard about this new field of obesity medicine that was on the rise in 2018.

And when I completed my obesity medicine fellowship, because there were so much, you know, I went to medical school, in 2000. I graduated in 2007. And even then it didn't seem like that long ago.

But we were not talking about weight and weight management in the same way that we are now. And so it's just been exciting to to see even the field grow.

And, as, as a, as a medical community learn so much more. Yeah, there's still such a lack of education for physicians oftentimes, and definitely for the public.

And I think one of the goals of this summit is to help empower people, give them the knowledge so that they can figure out what the right changes are for their health, and maybe even bring up that discussion with with their doctor.

So we were going to focus on insulin resistance, which is a topic that's coming up again and again in this DrTalks summit. Can you explain to us how you would explain to your patients what insulin resistance is and how it develop?

Yeah, yeah. So, you know, to even talk about it, first thing I like for people to realize is that insulin itself is a hormone. Because, you know, we hear so much stuff about, oh, my hormones are doing this or that, but insulin is a hormone, made in our pancreas.

What Insulin Resistance Is

And it actually, you know, we need insulin because it actually helps to regulate our blood sugar, within our cells and help us to use those, that necessary, those necessary cells for energy from the blood sugar.

Now, when this, sugar comes in from the foods that we eat, then that's when our body. So there's that signal to say,

hey, you know, we've our sugar has been elevated because we ate some foods.

So now this insulin needs to come in to get our blood sugar back down to its happy state because our bodies, you know, thrive in a, in a happy medium, if you will.

Now, when this whole harmony, you know, sugar and insulin, in this happy medium gets disrupted, then that's when insulin resistance, is at play. Insulin resistance is when your, your cells are still doing its thing, trying to keep your, blood sugar from getting too high, but they just aren't responding like they previously did.

And so when that happens, then your pancreas that makes the insulin is just thinking, well, hey, I just need to give you more insulin because clearly your sugar is still too high.

So I need to give you more to work with. But, that's really not the case. And so because of that, though, your pancreas continues to pump out more and more, and this is what leads to a lot of the conditions that are associated with insulin resistance.

Yeah. Thank you so much for explaining that. Sometimes I'll explain to my patients that insulin kind of works like a key to, you know, let sugar into the cell like it unlocks part of the cell and lets sugar in.

And I love your explanation of, you know, how the pancreas, when it's not seeing the cells respond to insulin, it just pumps out more and more insulin.

Right. And so that high insulin level is what can be really disruptive metabolically. It affects our appetite. It affects how we store fat. And it's like a weird thing where a lot of times our body self corrects.

But this problem doesn't self-correct, right? It kind of tends to spiral if we don't do anything about it. One of the things that has always been intriguing to me is like, why is this happening?

Like, why are we seeing so much more insulin resistance? And I think there are different explanations for this. We don't actually know for sure. What are some of your thoughts on why we're seeing more and more insulin resistance in our society?

Yeah. And so, you know, some of that I feel like, as we know that everything's multifactorial. And so some of that I feel is our diet, some of the foods that we eat, we know that, you know, certain processed foods, can be harmful to our body.

Those foods that come in packages, those foods that are high in fat and sugar, those things can, play a part in the development of insulin resistance.

We a lot of us, you know, are busier than even our, you know, our predecessors, our families were in the past. And so because of that, people are eating, you know, more processed foods, fast foods.

Because we're on the go a lot. And so that's playing a part. And then another, factor that's playing a part is movement or the lack thereof. You know, we aren't moving as much as we should be there.

You know, I've been some studies. Even the CDC has looked at this, where in places where they don't have as many green spaces or as many parks and playgrounds, they tend to have higher, rates of obesity, and conditions like insulin resistance.

And so that lack of movement also, you know, plays a key factor in it. And then another factor that's been a part of that, is sleep and stress. Especially here in America, you know, we're one of those countries where it's been found that people don't get enough vacation days or they don't even take them, you know, when they have them from their jobs.

And so that just leads to more chronic stress. And lack of sleep. And those issues, in turn, can, cause conditions

and insulin resistance that way? Yeah.

So definitely lots of different factors going in, with those processed foods that often have more available calories, more available sugar.

Why Insulin Resistance Is Increasing

And so our body's having to pump out more insulin to, utilize that sugar, and then it just becomes a vicious cycle. And there's some thought now as well that there maybe not just in our food, but other places in our environment, these obese pigeons, which are chemicals in the environment, whether those are plastics or dyes or pesticides or many other things that were exposed to that are often really hard to avoid, they may also be contributing to this obesity and insulin resistance, epidemic.

Yeah. And, you know, that's one of the exciting things too, about this field, because I was just reading something similar. What you were talking about those environmental, changes that are, you know, sorry that we're finding that play a part.

And, you know, I, I know I don't recall learning in medical school about the environment and how that plays a part, you know. No, no. No. I mean, like, really extreme things. Right?

We learned about like, lead toxicity, you know, and like, you know, but we didn't we weren't aware. I mean, like the bpas and stuff in plastic like that wasn't something it was talked about when we were in med school. Right?

I don't know if it's still talked about in med school. Right, right, right. So so exciting. You know, that this research is being done in that, we are learning more.

And I want to talk about exercise because exercise gets ignored a lot or movement, which is maybe a better way to think of it. As simple as walking your dog, playing with your kids at a park, just walking to the park at all and being there outside.

Because we talked about how your cells have to use insulin to get sugar in and use the sugar to do their job as cells. But one of the cells that are really special are our muscle cells, and they actually can use glucose independent of insulin.

And so when we're talking about trying to use up some of that sugar, so that we don't have to use too much insulin to process it, movement, even small movement, walking for a few minutes after you eat can have an impact right?

Yeah. Yep. Exactly. And you know, you talked about the term exercise and one of the terms I actually like and that I use with patients is intentional movement.

And the way I delineated is because, you know, I would talk to people, you know, in the office and we'll be talking about, their lifestyle and things that they do.

And they're like, you know. Yeah, I do. I get a lot of exercise because I, you know, I work here or there, and I walk around to talk to my coworkers or these things, and I'm like, yeah, but that's not doing it for us, you know?

So we have to have this movement with intention in mind and with the intention of whatever that goal is. So for, you know, I'm in the place of insulin resistance like we're talking about.

And our goal is lowering our blood sugar. Then we're moving with the intention. So if that, you know, looks like going for a 30 minute walk or a 30 minute jog or what have you swimming, you know, whatever it is, then it's done with the intention, with that in mind.

And not just kind of, you know, haphazardly. Wow. I walk to the mailbox because I had to go get my read. I didn't understand all day. I did move, so. Right. Right. Yeah.

And then the other, nice thing, though, you know, that the research is now telling us that it doesn't even have to be done in a big bulk of time. You know, I talk about those busy professional hours because I do tend to see those people in my office.

And one of the things that, you know, I tell them is that you can break up those, sessions of movement throughout your day because studies have shown even just 10 to 15 minutes, you know, doing that.

And if you do that a couple of times a day, that's just as good, as if you were trying to find a whole, you know, 30 minute block of time. That may be a bit harder for you to find that 30 minutes, an hour at one time. So.

Yeah. Yeah. And, like, not to geek out too much here, but what you're talking about is the difference between what we call non exercise activity thermogenesis or Neet, which is the other movement we do on our life that isn't into a planned physical activity.

And then there's our intentional planned physical activity where we're trying to get our heart rate up for a little bit of a longer time period by walking for maybe at least ten minutes, where we're trying to maybe strengthen our muscles or work on balance.

And it's like a little bit more intentional.

Movement and Exercise for Blood Sugar Control

All that movement throughout the day is also good for us. And a lot of our problem in modern society is that we're all sitting all day, like, look at us right now. We're both sitting right.

And so that that other stuff is important too. Like, we always encourage you to keep moving more throughout the day, but you probably also need that intentional, like you said, movement as well, to get additional health benefits.

Right. Exactly. Yeah. All right. So back to insulin resistance. How does this problem with insulin resistance, our body making more insulin than we need and our cells not responding to it.

How does that impact our ability to manage our weight. Yeah. Yeah. So it's in several ways. So you know one of them is weight gain. So insulin resistance can lead to weight gain like I talked about.

You know when you have excuse me when your body's become resistance to, to insulin, you have more circulating levels of insulin. And those circulating levels can actually affect the way that we store, fat and the way that we use fat.

And so you'll tend to store more fat. And especially it's been found that you'll store even more around your midsection or your waistline, leading to that weight gain.

It can also affect us by making it challenging to lose weight. And it's really, you know, the opposite of that for that same reason, because you're storing more fat, which in turn is making it more challenging for that fat to actually be broken down for energy and making it more challenging for you to actually lose weight.

Insulin resistance, can, you know, then increase your, your potential for developing those, complications of insulin resistance, like type two diabetes because you're sugars?

You know, I talked about it, that insulin can't come in and be sensitive enough to bring those sugars down in. You're constantly having higher blood sugar levels, which can lead to diabetes of if you aren't taking charge of, that condition and helping to improve your insulin sensitivity, as well as some other, inflammatory factors that we found to be associated with insulin resistance.

And so, those things can thereby increase your risk of heart disease, high blood pressure, affect your cholesterol. You know, so it's all multifactorial.

And then the other thing I like to touch on because, I feel like, a lot of people forget, even polycystic ovarian syndrome and some of those symptoms that are associated with it, some of the irregular cycles for, you know, the weight gain, those, more androgen type changes that they see, with PCOS, that's also related to insulin resistance.

There. You. It kind of all goes together. Right. And so that's one of the things we keep highlighting with different speakers in this program. Is that really all of this foundation of health kind of goes back to the same place.

This metabolic health has an impact on so many different things. And so if we can improve nutrition, improves movement, and improve weight loss, sometimes with the use of medications or surgeries or other things we need to do to help with our weight loss, then we're improving.

So many other health conditions along the way. Right. Exactly. Yeah. Yeah. So, you know, it's so much more, than even because a lot of times I feel like people see weight loss almost as a vanity metric.

You know, you and I know it's so much more to it than that. And so I tend to try to get people to even see that focus as health in these health conditions and things that you want to improve that you know.

So it's not even just a vanity metric of of weight. Yeah. So, so. Powerful. And, you know, I always like to say my mission is to help people lose weight, to live longer and live better.

And that's what I'm all about. And that threshold of how much weight someone needs to lose to get there is going to vary from person to person, right?

How Insulin Resistance Affects Weight and Health

In the case of insulin resistance, for example, that's a precursor to diet, right? Diabetes is on that insulin resistance scale. Prediabetes is on it.

But a lot of people have insulin resistance before they have even that prediabetes or high blood sugar, because for a while your pancreas is compensating, right?

It's pumping out the insulin, and your blood sugar will look normal for a while until it can't keep up anymore. And then your blood sugar goes up. We say pre-diabetes. It goes up more. We say diabetes.

We can do things when you have the insulin resistance right before you get to that progression. But the whole reason we're doing this is to, you know, prevent things like diabetes, right?

Or possibly reverse diabetes. Anyways, where I was going with all of that is if we take someone who has insulin resistance, they have this risk for diabetes and we help them have a 10% weight loss rate.

So if you weigh, say, 250 pounds and you lose 25 pounds, which is very doable for most people, then you have reduced your chance of progressing to diabetes by 90%, right?

So more powerful than any medication we have to prevent diabetes is that weight loss. So I always like to highlight that because again that's why I'm here.

I'm not trying to get everyone to be like a size six or, you know, to feel like they look like they did when they were 18 in a swimsuit. Like that is not my goal.

If that happens along the way, good for you. But that's not really the goal, right? We're trying to do things like improve fertility, reduce PCOS symptoms, prevent cancer, prevent diabetes.

And I think it's really important that we remember that's why we're doing this. Yeah. Yeah. For sure. And that, you know, we remind patients of that because, I know I'm sure you get as much as I did.

People come in and they say, well, I, you know, I want to be back that size I was when I was 20 something or whatever. And, you know, I'm like, well, you may or may not get to that, but let's focus on, you know, these factors that, that we have.

Let's see how you feel. Let's see what your blood work looks like. Let's let's. Say. You know, let's focus on the health side of it. Right. And the other stuff is, is like a beneficial side effect, you know.

Especially because then if we think about, you know, most of us at 20, we probably weren't even doing the most helpful things even to be that. Like, right, I know you look back and you're like, how, how was I like actually a normal weight back then?

Because I certainly am working a lot harder now than I was back then. Yeah. Okay. So what are some of the dietary factors that can impact insulin resistance and that people can do to reverse or improve insulin resistance?

Yeah. So I you know, I come from a plant based perspective. I'm also on plant based myself. And I have a, plant based nutrition certification. And so with that, I tell people to focus on getting more plants on their plate.

Now, that does not mean that we all need to run out and become vegan. So that's not never my mission. So I focus is getting more plants on our plate, what we know about our food intake, you know, those processed foods, those foods that are high in sugar or fat, sodium, those foods can promote weight gain, can make it, challenging for us to lose weight and can increase our risk of, these health conditions that we're trying to prevent and or reverse, from happening.

And so by having a more plant forward way of eating, with that looking like dark leafy greens, those cruciferous vegetables, fruits, you know, whole grains, whole, processed grains, those brown rice, barley, oats, having those types of foods within our, diet and within the way that we eat can actually be helpful, for improving insulin resistance.

I always one of the surprising things that I always tell people, it's even about carbs, because, you know, we hear so much about, well, you must, you know, go no carbs or low carbs as you can get it, but there are some carbs that can actually be helpful, in terms of insulin resistance.

And it's those unprocessed types of things. So those fruits and vegetables, those things will contain carbs. But you're body the way that they process them, it's going to be helpful for you.

Fiber. So fiber by way of, you know, those things that you can get even from brown rice, oats, barley, that fiber can help you to stay fuller longer. That fiber is more slowly released so it doesn't tend to spike our blood sugar.

Plant-Based Eating Strategies

In the same way as some of the more processed foods does. And in turn, helps our our body. We talked about that pancreas wanting to pump out more and more insulin.

When you have these big sugar spikes, what fiber helps you to have a more steady, rise in your sugar versus a quick spike? And so it makes it less work for that, pancreas to have to do in that insulin, too, has to do to get you back down to a happy medium.

So, yeah, so just even, you know, those just simple things of adding. Right? So while low carb may be a strategy which can often help with insulin resistance, it doesn't have to be the strategy.

It's not going to work for everyone. But eating the right type of carbohydrates, if you're if you're not going to go on like a keto diet, for example, you need to eat the right carbohydrates, which are these whole foods?

I always tell people, especially my like, keto patients who get like, really, you know, kind of obsessed about the carbs in their vegetables. Like, no one's weight struggle is from eating too many vegetables.

Like, don't overthink the broccoli. Broccoli is not why anyone is struggling with their weight. Like it's just really not right. I don't know, cards in your broccoli, right?

Yeah. You will not find a peer reviewed study study, right? Right? Right. Yes. I don't need a study to say that broccoli is not the problem. And we can probably find a news article that will tell us any food is going to kill us or is bad for us.

But, you know, really, when and again, I think low carb can be a strategy. I think plant based strategy think they're all great. What we see with, when we focus on plant based is it needs to be those whole foods, right?

So simply going vegan but eating processed vegan mac and cheese from a box is not going to have the same health benefits. Is eating, you know, whole grain, oats that you've cooked on the stove and, you know, broccoli and lentils, right.

Like, those are different types of carbohydrates. Exactly. And that's and that's exactly the key. And that's also why I said, no, the goal is not for everybody to become vegan, because I even tell people I know some vegans who don't like vegetables.

They don't. They will eat whatever processed, you know, thing that's called plant based, but it's not a healthful diet. And so really, you know, focusing on the the least process things that that you can find and consuming those foods.

And that's really where you're going to get those health benefits. And what I like about focusing on more whole plants, fruits, vegetables is that it pushes other stuff off your plate, right?

If you focus on eating leafy greens and broccoli, asparagus, cantaloupe, whatever those plants are, it is going to push, you know, the white rice and the chips and whatever else off your plate.

And so instead of having to say, no, no, no, I shouldn't eat that, you're just eating something else instead, which is a great mindset thing, I think, for a lot of people too.

Right. Yeah, exactly. And you know, the the kicker is that they'll be more full, from eating these more whole foods. You get, you know, more full. And then that lessens those cravings and those spots, you know, for grabbing the more snacky things because you're not even hungry.

Your body's fueling your sugars at a happy medium. And so you're not crazy, right? That fiber becomes like a gel, you know, sort of in your stomach and fills it up.

So you you actually do feel more physically full from it. So do you have any specific suggestions for people who are trying to incorporate more plants into their diet?

Yeah, yeah, I did. So the first tip I tell people is to keep it simple. And you know what that can look like is, you know, don't feel like to get more plants that you got a one you definitely don't want to go buy every, you know, vegan food that has a plant based stamp on it.

Because that's not going to equate to help. But keep it simple. Keep, you know, those dark leafy greens like we talked about. You can buy frozen, vegetables.

Even you can get a bag of frozen broccoli, a bag of frozen peas, you know, and have those things. And just don't overcomplicate it. Don't feel like you have to go get a whole recipe book and, you know, do stay in the kitchen for hours at a time because you really don't.

So just keep it simple. Another, thing I like to mention to people is to plan ahead. So. And that can look like, you know, your meal planning ahead can even just look like having certain staples in your home.

One of the the things I do at the beginning of every week is I go buy the that ginormous box of spring mix and a ginormous box of spinach, because I know those can be the basis for whatever other meals that I'm going to have during the week.

So even just that little bit of planning ahead or even, you know, purchase the pre chopped stuff, you know, I'm all about, busy, busy people hacks, so purchase it pre chopped it for you.

You know, if that's going to make it easier for you. And then, you know, something else I like to mention to people is just really making it things that you enjoy.

So if you know that you enjoy, for instance, tacos, there are ways to make those tacos more healthful for you. You know, choose make sure you choose a whole grain tortilla.

Make sure you're adding lots of vegetables. Adding beans. Those beans are definitely helpful. In conditions of insulin resistance, beans are high in protein, beans are high in fiber.

And help to keep you fuller longer. So adding those things, into your taco to make it more healthful. And, you know, to keep away, you know, some of those other cheese and those other ingredients that you may feel that you need in that.

So go with, you know, those things that you like, if you like, a certain type of cuisine, then go for those flavors. Because for a lot of us, you know, we are triggered by the type of foods we want to eat because of.

We're looking for a certain type of flavor. And so, you know, you can incorporate those flavors even into your vegetables that way. Yeah. Those are a great tips.

And tacos or something that seems to always come up. I feel like it's a staple. A lot of places we have tacos probably once a week in our house. And I think one of the things also just is like, you can have a smaller portion of that food that your family and you enjoy, and then bulk up the rest of your plate with veggies too, right?

So if you have that big thing of spinach or those frozen veggies, great.

Stress, Sleep, and Closing Advice

Have one taco and then fill up the rest of your plate with a bunch of vegetables, right? And then you don't feel like you're missing out as much, but you're still getting all those vegetables in, too.

So that's another strategy that I'll sometimes have my patients use, where it's like, we don't have to reinvent the wheel here, right? Like, what can you do?

That's like a tweak to what you're already doing. So you're not having to make it more complicated, right? Yeah. Exactly that. And, you know, even, a little things like, you know, fruits that I use the example because, you know, kids like fruit snacks.

Well, make your own fruit snack, put it in a Ziploc, put a bunch of different fresh fruit, you know, some grapes or oranges that you've peeled. Whatever. Put it in a bag.

Now you got a great healthful fruit snack. And you know. Yeah, here's your vertex's version, right? Yeah. So just keep it simple. Oh, well, is there anything that we did not cover that you wanted to make sure everyone heard today? Ooh.

I they cover, you know, the bulk of it. Honestly, I think the only other thing that I would really mention and maybe one of the other speakers, I don't know, maybe talking about this, but that stress and sleep piece of it, just to make sure, you know, because we can be eating healthfully, but if we're still, you know, not getting quality sleep at night or if we're still, you know, working, jobs too much or, you know, doing live in stressful lives, and that's still going to

impact our body's ability, to process sugar and impact our insulin, sensitivity, and put us at risk of insulin resistance.

So I also, you know, like to remind people just to keep those other factors in mind, too. Yeah. So powerful. And I see that in my clinic where people will be doing everything right, and they're not getting that change in health because they're living at like a ten out of ten stress every day.

And once that stress changes, all of a sudden, you know, they're able to to lose weight. But that's sometimes the hardest thing for us to have an impact on as physicians is to treat stress.

We don't have a, easy button for that. Right? There definitely is. And, you know, there's there's not just a quick, you know, here's your medicine. Even mental health medications that they don't take away.

But, you know, the stress factors that are going on in your life, they just make you better able to cope with them. And so there's not an easy button.

So it's really just realizing that, you know, some things I do tell patients about the things that they can try, they can try acupuncture. They can even try just meditation.

Affirmation. There are some great apps for that. You know, sleep meditation, sleep stories. They're, you know, some other good, helpful tools out there that they can try even just taking a, a walk.

You can do a twofer and getting your attention on movement and your stress releasing by taking a walk, you know, ten, 15 minutes, just in the middle of your day, that way too. So.

Dr. Toombs-Withers, if someone wants to connect with you, where can they find you? Yeah. So I am on social media and sorts of health wellness clinic, and I can be on Facebook or Instagram, on TikTok, also under Dr. Shayla.

And then my website is drshayla.com/EOH There is a free, nourish and flourish, nourish and flourish course that you can, take part in. It's a great kickstart to, develop some healthy habits.

Within your day, to get started on your health journey. Amazing. Well, thank you so much for joining us. Thank you for having me. It's exciting.