

Episode 143 - Semiglutides- Magic Bullet?

MERYL: Welcome back everybody to the Rebel Nutritionist podcast.

And today you get yours truly. It is going to be me, talking to you about the hot topic, all about these semi glutides, these GLP one agonists. Yes. I'm talking about things like Ozempic, we go V and Manjaro.

So we're going to take a deep dive or at least, a 30, 000-foot view into what they are, how they work and my thoughts on them and how we can use them. —

Let's dive right in. So the what and the how, and you know,

let's start with these GLP 1 agonists. How do they work? And we're not going to get too deep into the science because I think science is sexy. I don't know that you guys all do. So basically these GLP 1 agonists, as they are called, **are not drugs.**

They are actually peptides. And what are peptides? You ask? Well, **they are string of amino, strings of amino acids. which are the building blocks of proteins.** And they essentially act like transmitters, meaning **transmitters that are telling the brain, they're acting in the brain to tell different parts of the body, how to perform.**

And peptides have actually been around since 1921, when insulin was first discovered. And since, since then it's become. Big in the bodybuilding community and of course in the anti-aging and longevity space.

But peptide drugs have been used in a wide range of therapeutic areas such as urology, respiratory pain, oncology, metabolic, cardiovascular, and antimicrobial applications. To date, more than 170 peptides are in active clinical development with many more actually in pre clinical studies.

So peptides have become a really unique class of therapeutic agents and reach in recent years because of their distinct biochemical characteristics and therapeutic Potential.

Although — peptides outperform small molecules and large biologics in some aspects, they often have issues because they suffer from what we call membrane impermeability, meaning they can't get into the cells to do what they need to do. And they're not always so stable. They don't last long enough in the body to actually exert their mechanism of action.

So there are some limitations for its use, but the bigger picture is the question that we're talking about today. Are they right to use for diabetes and weight loss? So here's the thing. **I do believe they can be right for the right person and useful and helpful in the right context, meaning when they're used correctly and appropriately.**

And that is the key here. So let's talk a little bit about how they work and then we'll get into you know, what, what they're doing and so forth. So again, **we're talking about the semi glutides the ozembic, Wigowy, rubelsis. Those are the first generation GLP1 agonists. Then we have the next generation where the trizepatide, which are like the manjaro.**

So, basically these GLP 1 agonists work in the brain. Remember I said they're transmitters, right? **So they work in the brain to decrease appetite. So they're basically working on the messengers, ghrelin and leptin, and they decrease appetite so you are less hungry.**

There actually also seems to be some insulin sensitization going on, meaning they are somehow looking to, or they somehow work in the context of working on insulin resistance, meaning insulin resistance. That's a whole other topic that we can get into.

And I think I have covered it, but when your body does not really pay attention to insulin any longer, and insulin is what brings the sugar into your cells. So your body can use the sugar for energy and whatever function it needs to be doing. And in type 2 diabetes specifically, we see insulin resistance.

So especially with the trizepatite, it seems to be that it acts in some way to help resensitize insulin. And so that's pretty incredible because it's actually like reversing insulin resistance. And I think that's a pretty good thing.

And yet we don't have all the answers yet with this. It's, it does seem to also impact the way glucose is handled in the body, but it is not having a direct impact on glucose itself. I think that's important to note.

So it decreases appetite and then subsequently will help decrease inflammation and inflammation in the brain, for example, because as you lose weight, body fat cells produce inflammatory cytokines, and they create inflammation.

So we'll talk a little bit more about that in a minute. But how is essentially, **how are these things helping reverse diabetes? Well, really, the answer is in the weight loss. Why? Because the weight loss is what is having the impact on the insulin.** So like I said, these drugs are not acting directly on insulin or directly impacting blood sugar, but they are driving weight loss and weight reduction.

And the side effect of weight reduction is reduced blood sugar and improved metabolic outcome. So we're also seeing improved outcomes in cardiovascular health, in liver function, in brain health, in depression, in inflammation like rheumatoid arthritis, and even in some autoimmune diseases, which rheumatoid arthritis is one.

So if you think about it, all of those diseases that I just mentioned are a result of a screwed-up metabolism, and these drugs are basically helping to better balance metabolism based on the fact that there's weight loss and a reduction in inflammation.

So the other. The big question then is why are we waiting actually to put people on these as a first-line treatment if they work so well, right?

Why are we trying things like metformin and some of these other things that don't work nearly as well. You know, why, why do we wait? Why do we wait until people are so far gone?

And I'm sure again, that's a bigger conversation because if we do these medications and these drugs first, they're not medications that we do these drugs first, then we wipe out the need for all those other ones and some people in that pharmaceutical industry might not be so happy. So I think there's a bigger discussion there, but if we think about it, **by the time you're diagnosed with diabetes or cardiovascular disease, there has been damage that has been going on for at least 10 to 15 years.**

Yes, 10 to 15 years. So that little tire around your middle people. **I don't care if you're a man or if you're a woman, that belly fat around your middle is an early indication of insulin resistance. So your labs could be completely normal. Your blood sugar can be completely normal. But as you start to accumulate that belly fat around your middle, that is your first indication of some kind of insulin resistance that it is on its way.**

And we know this doesn't just happen in a week. Or in a month or a year, it has happened over time and time, same thing with hypertension. The more weight you gain, the higher your blood pressure goes. So, the drugs that are out there that just treat the side effects of a messed up metabolism, the metabolism, like the things like your metformin, your blood pressure medication, your statin.

I mean, those are just. treating the side effects of a messed-up metabolism. **So the bottom line is, is that, if obesity is reversed, all other metabolic and health comorbidities — will also go away. And this is really true root cause, because again, all of these. are lifestyle induced diseases, and they're all driven by the fat cell.**

And so when your fat cell fills up, — it drives a lot of issues. Why? Because fat cells, as we now know, become inflammatory. They have something in them called adipokines. So When we have inflammation through the body, we call those things cytokines. Those are the messengers in our immune system that cause inflammation.

Well, now we know fat cells make something called adipokines. And these are very inflammatory. And these are inflammatory messengers in the fat cell. And they cause this vicious cycle of metabolic imbalance. And when you reverse that, the other comorbidities go away. So Why we why? Why wouldn't we consider peptide therapy for help with these kinds of things?

Now we'll talk about the side effects in a moment, right? But if we can see improvements over and over again with these, and they're safe, and they're pretty well tolerated. Like I said, maybe it would eradicate the need for the other drugs. That big pharma depends upon. So imagine if we eradicated all of the other metabolic issues, how would these companies survive?

Because here's the thing, **96 to 97 percent of the population is metabolically unstable**, metabolically out of whack. That is a huge percentage, 96 to 97%. — That means only three to 4 percent of us walking around are actually metabolically healthy. That is a huge number. And so think about this. If you were.

Even if you do a quick frame of reference, **if your waist circumference for a woman is greater than 35 inches or 40 inches for a man, that is signaling a problem.** So your waist should be half of your height, but again, like I said, 35 inches for women, 40 inches for men, something around there. Right. And so if your numbers are greater than that, there is a significant, significant increased risk for type two, type two diabetes and other, as I mentioned comorbidities that cause that, that produce that metabolic issue.

So let's talk for a second about some of the side effects because people have asked about that as well. One of the things we hear about are things like **gastroparesis, which is the slowing of how your food gets digested.** And it is a real risk for some people, but what has been reported is very, very small numbers of people have reported this as a big issue. It's really not been that common and there's not enough good data. To support to say that it's a significant side effect.

There are people who just can't tolerate the first generation, the Ozambic, the Wigovia really does cause them diarrhea, flatulence, significant stomach issues. So, that can definitely be a hindrance.

But again, not really great data on gastroparesis in and of itself.

And the other thing is that there is less of an issue with the manjaro with the trizepatide. So something to think about if you're considering that the other risk that on the label of these on the, on the black box label is **a cancer concern.**

And there has been a thyroid cancer shown in rats. No human data has confirmed this so we really are not sure about the downstream effect on this or really in what context that we would want to consider this other than the fact that if you've had thyroid cancer, definitely something to consider and definitely something to bring up with your physician if you know when you decide to go on this.

Otherwise, the safety data on these peptides is really pretty good. The other thing that has come up that people have asked about are the pancreatic issues. **So here's one thing to think about when you lose weight really, really quickly. which is what is happening with people on these, you put a huge burden and load on your organs of the pancreas of the liver of the gallbladder. So you can end up with an inflamed pancreas.** You can end up with gallbladder issues or even gallstones, and you can end up with some other kinds of minor. liver issues, right? So again, **when you have fast weight loss and you're already a metabolic mess, it can create a severe burden on the body.** And so the other thing to think about is severe cases of diabetes can also cause gastroparesis in and of itself.

I didn't mention that up at the top, but I had it in my notes. So I just wanted to make sure that I wrote that. So if we're talking about the pancreatic concerns again, Not enough long-term data on that, but I think the bigger issue here is that **if there are pancreatic issues, is it really more**

of a of a result of the rapid weight loss rather than something having to do directly with the peptide? So again, something to think about.

So let's talk about dosing, right? Where, because there's a lot of confusion about the dosing. The whole idea is that you want to start small and then titrate up. **Many doctors are just putting people on high doses. They're not how they're not teaching people how to eat, how to strength train, and they're basically putting them on it forever.**

So that is where This is where the huge problem comes in because then people are using it as that quick fix. Let me get in. Let me get out and I'm going to address that in a moment. But the way we really need to look at this is **it starts at 0. 25 right? And then goes up to 2. 5. And so you really, it really needs to be cycled up deliberately and intentionally, and you are not supposed to be on it forever, like many other peptides, actually, like most other peptides, they should be cycled on and off.**

So you think about cycling 90 days on, Okay. And then a month or so off. — **So if you're not taught how to eat well, how to strength train once you cycle off, you are going to see weight gain and it's going to be mostly in the form of fat.** And so that is a big issue because the other thing that we're hearing about.

Is this muscle loss, right? People are like, Oh, I have **the, Ozembic face because of the rapid muscle loss. So, yes, with fast and furious weight loss you see a big percentage of muscle loss. So when there's an aggressive weight loss, you lose somewhere between 25 to 30 percent of lean muscle mass.** And that is a big problem.

But what I will say is you also see that on severely restricted diets, right? So any rapid weight loss will cause that kind of aggressive lean muscle loss.

So what is, what do we do about that? Well, you have to strength train. And I can't tell you how many people I know that are on this peptide — and on these, these drugs that, Are not doing any kind of resistance training.

You are doing yourself a bigger disservice than you think by not incorporating any kind of strength training and making sure you want, the other thing that you need to do is **you need to make sure that you are consuming enough protein, especially for women. This is a big downside because when your appetite is decreased, which is a function of this peptide, you're not wanting to eat so much.**

So it's this double-edged sword because women especially are not getting in enough protein. They're not doing enough strength training. And they are losing all of their muscle. **So the other thing that we have to think about is muscle is the only thing that is metabolically active in our body.** If you lose. Muscle, you are losing your body's metabolic freight. Train. muscle is the only thing that is metabolically active Fat has very little metabolic activity. And the metabolic activity, as I mentioned, that it is, is more inflammatory based than in burning calories. **So if you are losing muscle and, and don't make. improvements or there's no strategies in place and no understanding of how to live a life that supports your metabolism, then**

yes, you are going to regain weight. It's going to be fat, not muscle, and you will end up fatter. Then where you first started and more metabolically messed up.

So if you're not strength training and you're losing weight, you are doing it wrong. And you know, it is truly a non-negotiable for good metabolic health and you know, especially for metabolic health, for weight issue for weight maintenance and for longevity. We know the leaner you are, it's not just thinner, the leaner you are, meaning lean muscle mass, the leaner you are, the longer you live, the better your overall health and it's not just about living a longer life. You live a better quality of life, which let's face it. Isn't that the most important thing we can have longevity. But if we're not enjoying that, those years, then what point is it right? We want to be able to have vitality as we age.

So and we know the other thing is not to completely go off the tangent tangent, but **insulin resistance is the number one cause of age-related illness in this country and obesity drives that. So we need to really introduce peptide therapy sooner rather than later and introducing it with a comprehensive lifestyle plan, because if you are not doing that you are doing yourself a huge disservice.**

So, again, recapping a little. **The semi glutides, the GLP 1 agonist, remove the compulsive urge to eat. And so if people are eating less, they're losing weight. And if they become educated and get the right tools, you learn how to make the right choices. With those right choices come all of those health improvements.**

But again, you still need to get back to what I would call the pillars of health and keep, start to create a balance in your life so that when you start weaning off, you are not ending up in worse shape than where you were when you started. So no, peptide therapy is not a magic bullet bullet.

So peptide therapy is not a magic bullet and if you are not willing to put in any of the effort to get and stay metabolically healthy, then this will not work long term. And that is what I think is so important. You know, the pillars of health that we talk about, we talk about your nutrition, we talk about your sleep, we talk about stress, Movement exercise and we talk about your mental and emotional health because all of those things are important in creating a healthy lifestyle.

So no, no magic bullet. Can it be really supportive and really helpful to give people a jumpstart to get them seeing the benefits sooner rather than later? 100%. And it's not the panacea, but it offers good options for those who have struggled to try and get their weight and health under control for so, so long.

So I hope that answers some of the questions, gives you a little insight. Into these types of therapies and I would love to hear your questions, your comments.

I am sure we will do a part 2 for those people who want to know a little bit more about the details, the mechanism of action. But I really just wanted to pop on and give you guys a sense of what these are about, what they do, what they can offer and what they cannot. So hope that helps and gives you some food for thought with that.

And this is your Rebel Nutritionist signing off. Make it a great day, everybody.