What No One's Talking About: How GLP-1 Drugs May Be Setting You Up for Insulin Resistance and Higher Body Fat

By Robert Ferguson

There continues to be a lot of hype around **glucagon-like peptide-1 (GLP-1)** receptor agonist drugs like *Ozempic, Wegovy, Mounjaro, and Zepbound*. They're marketed as **miracle weight-loss solutions for some**, and a **last option for others**. But what's not being discussed, and should concern anyone using or considering these drugs, is **what's happening beneath the surface**.

While the number on the scale may go down, the weight lost isn't always fat. A significant portion of that weight loss is **fat-free mass**, including **skeletal muscle**, which plays a vital role in metabolism and insulin sensitivity. A 2023 study published in *JAMA* found that up to **40% of the weight lost from GLP-1 drugs is from fat-free mass**, not fat. And in the **72-week SURMOUNT-1 trial**, a **body composition substudy** of **tirzepatide** (a dual GIP/GLP-1 receptor agonist), participants lost an **average of 6 kilograms (13.2 pounds) of lean mass** during treatment.

This matters more than most people realize. Research shows that **when just 8% of total weight loss comes from fat-free mass, the risk of heart attack can increase by 300%**. When skeletal muscle is lost instead of preserved, the result is often **poorer cardiovascular outcomes**, **greater insulin resistance**, and a **slower metabolism**—even if the scale says you're "healthier."

GLP-1: Nature's Appetite and Insulin Helper

When your body produces GLP-1 naturally, it's released in small amounts after eating. This gut-derived hormone plays a vital role in helping you:

- Signal the pancreas to release just enough insulin
- Feel full and satisfied
- Slow stomach emptying, just enough to support digestion

Once the job is done, GLP-1 levels naturally decline. It's part of a beautifully balanced system designed to keep your metabolism and appetite in sync.

GLP-1 Drugs: Turning Up the Volume Too High

GLP-1 receptor agonists like *Ozempic and Wegovy* flood the body with far more GLP-1 than it would naturally produce. This "supraphysiologic" dose overrides the body's rhythm and can result in:

- **Excess insulin production**, even when blood sugar is already normal
- **Suppressed hunger**, even when nutrients are needed
- **Delayed stomach emptying**, to unnatural levels
- **Fatigue, nausea, and food aversion**, even when energy is low

It's like turning the volume on your body's natural cues so high that you can't hear them anymore.

Do GLP-1 Drugs Improve Insulin Sensitivity?

Yes, **initially**. GLP-1 receptor agonists are prescribed to help manage type 2 diabetes because they:

- Lower blood sugar
- Promote weight loss
- Temporarily help the body use insulin more effectively

But here's what's not being discussed:
Over time, especially with prolonged use or after stopping the medication, GLP-1 drugs may worsen insulin sensitivity, setting people up for greater insulin resistance.

Why?

- These drugs can **keep insulin levels elevated**, even when blood sugar is already normal
- Chronically high insulin **prevents fat burning** and encourages fat storage
- Research shows **up to 40% of the weight lost** may come from **fat-free mass, including muscle** (*JAMA*, 2023)
- In the **72-week SURMOUNT-1 substudy**, **tirzepatide led to an average 6 kg (13.2 pounds) loss of fat-free (lean body) mass**
- **Losing just 8% of body weight from lean mass (fat-free) can increase heart attack risk by 300%**
- **Less muscle = slower metabolism and lower insulin sensitivity**
- After discontinuing the drug, many people experience **rebound weight gain**, often in the form of **visceral fat**, which drives insulin resistance

So, while GLP-1 drugs may seem like a solution at first, they can increase the risk of long-term **fat gain**, **metabolic dysfunction**, and **insulin resistance**, especially without meaningful lifestyle changes.

But What If I Just Use GLP-1 Drugs to Jump-Start My Weight Loss?

It's a common mindset:
"I'll just take a GLP-1 drug for a few months to get the weight off—and then I'll maintain it naturally."

At first glance, this might sound reasonable. But once you understand what's happening **underneath the weight loss**, the risks become harder to ignore.

When weight is lost too quickly, and especially when GLP-1 drugs are used without a muscle-preserving strategy (like resistance training and adequate protein intake), the body doesn't just lose fat, it **sheds muscle**. And that's where the real danger lies.

Here's why this strategy may backfire:

- **Up to 40% of the weight lost on GLP-1 drugs can come from fat-free mass**, including **skeletal muscle**, according to *JAMA* (2023).
- The **SURMOUNT-1 trial** showed that participants on **tirzepatide lost an average of 6 kg of lean body mass over 72 weeks**.
- Losing **just 8% of your body weight from lean mass** has been associated with a **300% increased risk of heart attack**.
- **Some muscle loss is irreversible**, especially with age or in people with low baseline muscle mass.
- Less muscle means a **slower metabolism**, **worse insulin sensitivity**, and a **greater chance of gaining fat back**, especially as **visceral fat**, the most dangerous type.

What seems like a "jump start" may **set you back metabolically** and make long-term fat loss harder to achieve and maintain.

Bottom line:
GLP-1 drugs may suppress appetite, but they don't protect your muscles. Without a strategic plan, you're not just losing weight; you may be **trading muscle for fat** and harming your metabolism in the process.

The Hidden Consequence: You Burn Less Fat

Insulin is a powerful fat-storage hormone. When insulin levels are elevated, even modestly, your body becomes less likely to burn fat.

So even if the number on the scale goes down, your body composition may be shifting in the wrong direction. High insulin levels tell the body to **store** fat and preserve energy. This means:

- **Less fat burning**
- **More lean tissue lost**
- **Slowed metabolism**

Fat Percentage Can Actually Go Up

You may weigh less, but if you've lost skeletal muscle and water instead of fat, your **body fat percentage may increase**.

Why that matters:

- **Lower muscle mass** leads to a **slower metabolism**
- **Higher body fat %** is linked to **increased disease risk**
- **Worsened insulin resistance** makes it harder to maintain weight loss

When the drug is discontinued, your body—now with less muscle and greater insulin resistance, is more prone to **rebound weight gain**, especially **visceral fat**, which surrounds organs and increases risk for diabetes, heart disease, and inflammation.

Why This Isn't Being Talked About

The pharmaceutical industry celebrates scale-based weight loss but rarely discusses *what kind* of weight is being lost. Most doctors aren't testing for:

- Fasting insulin
- Fat-free mass
- Body fat percentage

Instead, they rely on superficial metrics like pounds lost and glucose levels.

But without knowing what's happening under the surface, people are being misled, and their long-term metabolic health is at risk.

The Bottom Line

GLP-1 drugs can offer short-term benefits, especially for those with type 2 diabetes. But the way they override natural insulin and appetite rhythms has serious consequences when used long-term or without lifestyle changes.

Before jumping on the GLP-1 bandwagon, ask:

- Am I **burning fat** or just **losing weight**?
- Is my **insulin staying high**, even if my blood sugar looks normal?
- What will happen when I **stop the medication**?

Natural GLP-1 activation, through fiber-rich foods, movement, and targeted nutrition, supports metabolic health **without hijacking your biology** or damaging muscle mass.

This is the conversation that needs to be had. Feel free to email me at robert@dietfreelife.com with additional questions or click to schedule a free consultation, and we can provide options to include avoiding and transitioning off GLP-1 drugs.

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Robert Ferguson is a California- and Florida-based single father of two daughters, nutritionist, researcher, best-selling author, speaker, podcast and television host, health advisor, NAACP Image Award Nominee, creator of the Diet Free Life methodology, and Chief Nutrition Officer for iCoura Health. He also serves on the Presidential Task Force on Obesity for the National Medical Association and the Health and Product Advisory Board for Zinzino, Inc.