How GLP-1 Works – The Science of How the Weight Comes Off

By Robert Ferguson

Would you take a GLP-1 drug to lose weight if…

- it increased your risk of **heart attack by 300%**?
- it raised your chances of **major depression by 195%**, **anxiety by 108%**, and **suicidal behavior by 106%**?
- it **cut your brain's dopamine levels by up to 50%**, reducing your natural motivation, energy, and joy?
- it caused you to **look older**, become **frail**, and lose **skeletal muscle**—the very tissue that keeps you youthful and metabolically active?

These are **real risks**, backed by emerging research. For example, a 2023 study published in the *Journal of Cachexia, Sarcopenia and Muscle* found that losing skeletal muscle during weight loss was associated with a **threefold increase in the risk of cardiovascular events**, including heart attack (Tsujimoto et al., 2023). Another study out of Denmark reported a more than threefold increase in the risk of heart attack among GLP-1 users who also had type 2 diabetes and cardiovascular history.

When you're no longer hungry but consuming far too few nutrients, the body doesn't celebrate—it panics. It starts to **catabolize (consume) its own skeletal muscle**, reduce energy output, and blunt the very neurotransmitters (like dopamine) that drive joy, movement, and motivation.

This explains the **flat mood**, **low drive**, and **gaunt appearance** seen in many people on GLP-1 drugs.
Case in point: Sharon Osbourne, once full of life, now appears dramatically frail after using a GLP-1 drug. And she's not alone.

If You're Taking Ozempic, Wegovy, Zepbound, or Similar Drugs—Read This Closely

Whether you're taking these drugs to manage **type 2 diabetes** or to **lose weight**, you deserve to understand the science behind what's happening. Please consider printing this article and sharing it with your doctor. The information here could change the direction of your health—and your life.

Also, if you know someone who is taking or considering these medications, share this article with them. We all deserve to be informed.

The Minnesota Starvation Experiment

In the 1940s, 36 healthy men voluntarily ate 50% fewer calories for six months so scientists could study the effects of starvation. What happened shocked even the experts.

Here's what they found:

- The men lost weight—but **40% of that weight was fat-free mass**, not just fat.
- A significant portion of that fat-free mass was **skeletal muscle**, which is essential for metabolism, movement, and long-term health.
- Their **metabolism dropped dramatically**, making long-term weight maintenance even harder.
- They experienced:
    - Hair loss
    - Constant fatigue
    - Pale skin and dizziness
    - Feeling cold all the time
    - Obsessive food thoughts
    - Mental and emotional decline

When the experiment ended, most of the men regained all the weight—and then some—with a higher proportion returning as fat. This is exactly what we're now seeing with people who lose weight using GLP-1 drugs. Their bodies adapt to the induced starvation by slowing metabolism and conserving calories, making long-term weight maintenance even harder.

GLP-1 Medications = Starvation Without Hunger

Before we dive further into how these drugs affect body composition, it's important to understand that **our own intestinal tract naturally produces GLP-1**—a type of **incretin**, which is a hormone and peptide that plays a key role in regulating blood sugar, appetite, and digestion. These natural GLP-1s bind to receptors throughout the body to support healthy metabolic and physiological processes.

However, what we don't yet fully understand is the **long-term impact** of flooding the body with **synthetic GLP-1 drugs** and how this may overstimulate or desensitize those same receptors over time. The consequences of constant artificial activation could be profound and are largely unknown.

In addition, with increasing awareness around the importance of **gut health and the microbiome**, emerging evidence suggests that these drugs may be **disrupting microbial balance** in the gut. Since the gut is deeply connected to mood, immune function, and metabolic health, any imbalance here is a red flag—and could contribute to broader health complications down the line.

GLP-1 drugs like **Ozempic**, **Wegovy**, and **Zepbound** primarily work by slowing stomach emptying and signaling satiety to the brain, which reduces your desire to eat. The result? You consume significantly fewer calories—often without realizing how little nourishment your body is receiving.

And that's where the danger begins.

According to the **Journal of the American Medical Association (JAMA)**:

"Roughly 40% of the weight lost on GLP-1 drugs is fat-free mass—a large portion of which is skeletal muscle."

Let that sink in. These medications don't burn fat—they suppress appetite, causing you to eat far less. The resulting weight loss comes from a calorie deficit that mimics starvation, just like in the Minnesota Starvation Experiment. As a result, the body loses significant amounts of fat-free mass, which includes skeletal muscle, water, organ tissue, and other vital non-fat components. Unlike fat, skeletal muscle is difficult to rebuild—especially after the age of 40.

Side Effects That Should Raise Serious Questions

Some people assume that GLP-1 drugs must be safe simply because they're approved by the FDA. But history tells a different story. Over the years, numerous FDA-approved drugs were later pulled from the market due to serious, and sometimes fatal, side effects. Consider these examples:

- **Vioxx** – A painkiller approved in 1999 and pulled in 2004 after studies linked it to an increased risk of heart attack and stroke.
- **Fen-Phen** – A popular weight-loss drug combination withdrawn after it was shown to cause heart valve damage.
- **Rezulin** – A type 2 diabetes medication withdrawn due to severe liver toxicity.

FDA approval does not guarantee long-term safety. It simply means that a drug has met certain short-term criteria. As with many GLP-1 medications, long-term studies are still unfolding—and the consequences may not be fully known for years.

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People are experiencing **more than just nausea**. Here are growing concerns from real users and emerging studies:

- **Heart complications**
- **Hair loss**
- **Weakness and frailty**
- **Loss of skeletal muscle tone**
- **Accelerated aging appearance**

- **Mental health declines**, including **depression, anxiety**, and even **suicidal thoughts**
- **Up to 50% suppression of dopamine** in brain reward centers, especially the nucleus accumbens (animal studies)

These medications **blunt motivation and pleasure pathways**, with human brain imaging showing reduced neural activity in reward regions during food anticipation.

The Problem with "I'll Build Muscle Later"

Some believe they can lose weight quickly now with a GLP-1 drug and build back muscle later. That plan sounds fine—**if you're 25**.

But after 40, the **body naturally loses skeletal muscle every year** unless you're actively fighting to maintain it. Once it's gone, regaining it becomes **extremely difficult**, especially in the absence of optimal hormone levels and resistance training.

So if you're losing skeletal muscle now, **you may be slowing your metabolism for good**.

What's Really Causing the Weight Loss?

The common belief is that GLP-1 drugs "boost metabolism" or "burn fat." But that's **not true**.

They cause **weight loss** by putting the body in a **state of semi-starvation**, but without the discomfort.

That's why it works. That's also why **your body starts catabolizing (eating) itself**, leading to:

- Gaunt facial appearance
- Saggy skin
- Shrinking skeletal muscles
- Fatigue
- And ultimately, **weight regain** when you stop the drug

The Real Solution: Science-Based, Sustainable Health

If you're battling **pre-diabetes**, **type 2 diabetes**, or just want to lose weight in a way that doesn't sacrifice your future health, consider a **"food as medicine" approach**. It focuses on:

- Optimizing your insulin and glucose
- Balancing your omega-6 to omega-3 ratio
- Preserving and even **building skeletal muscle**
- Supporting mitochondrial health and metabolism
- Improving mood and mental clarity
- Getting measurable results through validated testing

You don’t have to trade skeletal muscle, mood, or years off your life to drop a few pounds.

Final Thoughts

We’ve known for nearly **80 years** what happens when the human body is deprived of food: it **breaks down** skeletal muscle, slows the metabolism, and suffers mental and emotional trauma. Now we’ve wrapped that same biological response in a new name: **GLP-1**.

Whether your goal is blood sugar control or weight loss, you need a plan that works with your body—not one that puts it into a medically induced famine.

Key Takeaways:

- GLP-1 drugs do not burn fat; they suppress appetite, leading to calorie restriction.
- Weight loss from these medications mimics starvation and often results in the loss of fat-free mass, including skeletal muscle.
- Muscle loss slows metabolism and increases the risk of weight regain.
- Long-term effects of synthetic GLP-1 on natural receptor function and gut health remain unclear.
- A science-based, food-first approach protects metabolism, muscle mass, and long-term wellness.

You deserve better. And the science is on your side.

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