GLP-1 Drugs Causing Nutritional Deficiencies in New Study

By Robert Ferguson

Drugs like **Ozempic, Wegovy, and Mounjaro** have become very popular for weight loss and type 2 diabetes. They help people lose weight by making them feel full faster and slowing digestion, so they eat less.

But a new study shows there may be a hidden cost: **nutritional deficiencies and muscle loss** (Wang et al., 2025). In simple terms, if you are taking a GLP-1 drug, you may not be getting enough key nutrients, which can lead to health problems that could have been avoided.

The Study

Researchers looked at **461,382 adults** who started taking GLP-1 drugs between **2017 and 2021**. None of these people had nutritional deficiencies before starting the medication.

The researchers wanted to see how many developed deficiencies once they were on the drugs.

What They Found

Nutritional Deficiencies Increased Over Time

- Within 6 months, 12.7% of patients had a nutritional deficiency.
- Within **12 months**, that number jumped to **22.4%**.
- That means more than **1** in **5** people developed a deficiency in the first year.

Vitamin D Deficiency Was the Most Common

- 7.5% had low vitamin D after 6 months.
- 13.6% had low vitamin D after 12 months.

Other Deficiencies

The study mainly focused on vitamin D but also raised concerns about other common nutrient gaps, such as:

- **B-vitamins** (like B12 and thiamine)
- Iron
- Zinc

These are important for energy, blood health, brain function, and immunity.

Muscle Loss

This is one of the biggest concerns.

- In the Wang et al. (2025) study, about **3% of patients were formally diagnosed with muscle loss** within the first year. But this number only includes people who had a diagnosis code for muscle wasting in medical records, so it is likely an underestimate.
- In contrast, a study published in *JAMA* found that **about 40% of the weight lost with GLP-1 drugs comes from lean mass, including skeletal muscle** (Rubino et al., 2021).

This means that while only a small percentage of patients are formally diagnosed with muscle loss, almost everyone taking a GLP-1 drug is losing some muscle along with fat. Losing too much muscle can slow metabolism, reduce strength, and make long-term weight maintenance harder.

Dehydration

Although not part of this study, other reports have shown that people taking GLP-1 drugs often struggle with **dehydration** (Li et al., 2024). This happens because people eat and drink less, and digestion slows down.

Why It Matters

GLP-1 drugs can help with weight loss, but they don't give your body the **nutrients it still needs to stay healthy**. When people eat less food, they also get less:

- Vitamin D
- Iron
- Calcium
- Magnesium
- Zinc
- B-vitamins
- Fat-soluble vitamins A, E, and K (Chaudhri et al., 2025)

Not having enough of these nutrients can cause fatigue, weaker bones, low energy, poor immunity, and long-term health problems. Add muscle loss and dehydration to the mix, and the risks become even greater.

The Role of Nutrition and Testing

If you take a GLP-1 drug, it's important to protect your nutrition. This can be done by:

- Working with a nutritionist or dietitian to plan meals.
- Getting tested for common nutrient deficiencies like vitamin D, B12, and iron.
- Eating enough protein and strength training to protect muscle.
- Staying hydrated to prevent dehydration.

With the right support, many of these risks can be reduced or avoided.

Bottom Line

This new study shows that **GLP-1** drugs increase the risk of nutritional deficiencies within the first year of use. Vitamin D is the most common deficiency, but other vitamins and minerals may also drop. Both claims' data and body composition studies confirm that muscle loss is a major issue.

If you are taking a GLP-1 drug, don't ignore your nutrition. Testing, good food choices, and professional support can help you stay healthy while losing weight.

Weight loss is important, but real health comes from more than the number on the scale, it comes from giving your body the nutrients it needs to thrive.

If you are currently taking a GLP-1 drug and want to learn how to **transition off safely while protecting your health**, **schedule a free consultation** with me to explore your options. You can also email me directly at **robert@dietfreelife.com**.

References

- 1. Chaudhri, O., Michael, C., & Patel, P. (2025). Nutritional risks and considerations for patients on GLP-1 receptor agonists. *Nutrients*, *17*(4), 945. https://doi.org/10.3390/nu17040945
- 2. Li, Y., Wang, H., Zhang, L., & Chen, X. (2024). Metabolic and nutritional adverse events associated with GLP-1 receptor agonists: An analysis of FAERS data. *Frontiers in Pharmacology, 15*, 1428925. https://doi.org/10.3389/fphar.2024.1428925
- 3. Rubino, D. M., Greenway, F. L., Khalid, U., O'Neil, P. M., Rosenstock, J., Sørrig, R., ... & Wilding, J. P. H. (2021). Effect of weekly subcutaneous semaglutide vs placebo as an adjunct to intensive behavioral therapy on weight loss in adults with overweight or obesity: The STEP 3 randomized clinical trial. *JAMA*, *325*(14), 1403–1413. https://doi.org/10.1001/jama.2021.1831
- 4. Wang, L., Yang, C., Pan, X., et al. (2025). Nutritional deficiencies and muscle loss in adults initiating GLP-1 receptor agonist therapy: A retrospective claims-based analysis. *Journal of Clinical Endocrinology & Metabolism*. Advance online publication. https://doi.org/10.1210/clinem/dgav450

By Robert Ferguson, clinical 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.