

## WEIGHT LOSS

# GLP-1: The Metabolic Game Changer?

**Medicalized weight loss drugs continue to revolutionize appetite control and health, influencing diet, the food industry, and consumer lifestyles**

By Henk Hoogenkamp

**H**ealthy eating is largely a personal choice with no universal definition. Broadly, it can be described as eating predominantly fresh foods while balancing healthy choices with occasional indulgences. However, people often define healthy eating as proactively selecting foods low in fat, sugar, and salt, preparing home-cooked meals, and incorporating functional benefits that support the heart and gut.

Particularly in the US, the concept of healthy eating is fraught with controversy, disagreement, and scrutiny among government agencies and various self-interest groups. This debate is further complicated by glucagon-like

peptide-1 (GLP-1) weight-loss pharmaceutical products, which add another variable to dietary choices that impact health and well-being.

There appears to be a breakthrough since the US FDA approved semaglutide prescription medications for chronic weight management in adults with type 2 diabetes and/or obesity. These drugs not only help patients shed weight but also boost revenue for pharmaceutical companies. The demand in the coming years is expected to be extraordinarily large. However, key questions remain: Who will bear the cost? Will it be out-of-pocket costs for consumer-patients, insurance providers,

or government and employer support subsidies, covering up to US\$1,200 per month for people to lose weight?

### Analyzing Long-Term Risks

These new pharmaceutical drugs are available by prescription only and are specifically intended for individuals who struggle to lose weight through traditional methods or have a body mass index of 30 or more. Common GLP-1 pharmaceutical products, such as Ozempic and Wegovy, contain semaglutide as the active ingredient, while Mounjaro and Zepbound use tirzepatide. For instance, Ozempic is an injectable prescription medication approved to treat type 2 diabetes,

whereas Wegovy is approved to treat obesity. In practice, patients often use these two brands interchangeably. Initially, these glucagon-like peptides were used to treat type 2 diabetes and obesity. Today, many users also have conditions like hyperlipidemia (high lipids or fats in the blood), cardiovascular issues, or sleep apnea. GLP-1 medication can be considered a metabolic reset button and an efficient tool to kickstart obesity- and diabetes-related lifestyle changes.

The story of GLP-1 is relatively recent, and further epidemiological studies are required to evaluate the long-term health effects of these medications. This is especially important for healthy individuals taking these pharmaceuticals for weight loss, who must weigh the risks up against the benefits.

### Subcutaneous Needle

GLP-1 medications are administered through subcutaneous injections. For example, the beginning dosage of Ozempic is 0.25 mg once a week for the first four weeks and, if needed, is increased to the maximum recommended dose of 2 mg weekly. Although these prescription medications seem to magically reduce body weight and alleviate type 2 diabetes symptoms, it is crucial to emphasize that lifestyle and proactive dietary changes remain the backbone of their success. A balanced diet and lifestyle—including exercise and optimal sleep—are essential to achieving improved health. Users of GLP-1 prescriptions are recommended to maintain proper nutrition and hydration throughout the day.

### The GLP-1 Gut Link

Gut health is the foremost physiological benefit of dietary fiber. Fiber promotes the production of short-chain fatty acids, lowers gut pH, and strengthens gut barrier function by serving as a source for gut cells. Beyond improving digestion, dietary fiber is linked to satiety and interacts functionally with hormones, like peptide tyrosine, to enhance GLP-1 secretion. GLP-1 and pep-



➤ GLP-1, produced in the small intestine, stimulates insulin production, lowers blood sugar levels, slows stomach emptying, and reduces the levels of hunger hormones.





➤ Special-formulated food products promote natural GLP-1 responses to a meal or “pre-meal hunger support.” Nestlé’s Boost brand of nutritional drinks is positioned to be consumed before a meal to help consumers feel more satisfied.

tide tyrosine function similarly to weight-loss medications such as Eli Lilly’s Zepbound and Mounjaro (tirzepatide) and Novo Nordisk’s Wegovy and Ozempic, which are popular in the US and EU for curbing appetite and inducing rapid weight loss.

And, while GLP-1 medications have broad benefits, they also carry risks.

### Obesity Medication: Is the Long Wait Over?

Until a true wonder drug emerges to effortlessly melt away excess weight, individuals have no choice but to proactively address their expanding waistlines.

The key to weight loss is simple: eat less. While low-carb or low-fat diets may work for some and fail for others, people should not ask, “What is the best diet?” but rather, “What is the best diet for me?” In modern society, the idea of eating less and exercising more oversimplifies reality. Whether adopting a low-fat or low-carb approach, the fundamental strategy should be similar: reduce sugar, refined flour, and excessive fat while prioritizing minimally processed, whole food options.

When combined with a reduced-calorie diet and increased physical activity, medications like Novo Nordisk’s Wegovy and Ozempic can potentially reduce appetite and enhance feelings of fullness. Currently, the popularity of these blockbuster obesity medications continues to soar among those seeking an easier route to weight loss. A welcome bonus is that Wegovy has been proven to reduce the risk of heart attacks and strokes by 20%. The race for dominance in the weight-loss market is far from over. Novo Nordisk has another promising drug in development, branded as CagriSema, which is expected to receive approval for market introduction in 2026.

### Positive Body Awareness

Eli Lilly’s Zepbound is an injectable prescription medication for

individuals suffering from obesity or chronic overweight issues. Reports indicate that patients treated with Zepbound can achieve double-digit percentage weight loss compared to single-digit percentages with diet and exercise alone over nine months. However, after discontinuing the medication, initial weight loss may partially reverse, along with other health markers like blood pressure, cholesterol, and metabolic diseases showing a tendency to return to pre-medication levels.

Studies have reported that approximately 80% of individuals who discontinue GLP-1 medications regain 80% of their lost weight as they return to their previous eating habits. The hope is that those who stop using these prescriptions will continue healthier eating patterns, but only about 10% of consumers demonstrate the discipline required to do so.

It is still too early to determine how obese individuals respond to smaller dietary food portions and more intensive lifestyle regimens paired with the “new wonder medicine.” Those who combine the medication with exercise are likely to succeed in keeping weight off more permanently.

It’s worth noting that some weight-loss pharmaceuticals are associated with risks such as stomach paralysis and other

gastrointestinal issues. Stomach paralysis—gastroparesis—disrupts the movement of food from the stomach into the small intestine, hindering digestion and causing side effects like nausea, vomiting, bloating, gas, reflux, and fullness. In rare cases, individuals may be at risk for pancreatitis, an inflammation of the pancreas often caused by gallstones, alcohol, or high triglycerides.

Other potential side effects include mood irritability, nausea, diarrhea, constipation, and stomach discomfort. These drawbacks highlight that semaglutide treatments are not a universal solution.

Additionally, some users experience excessive fat loss in the face, which may create an aged appearance. “Ozempic face” is a new medical buzzword that the industry is starting to hear more of. Users appear to have sunken eyes with increased wrinkles around the area, sagging jawline skin, hollowed cheekbones, and dark under eyes.

### The “Everything” Drug?

Notably, the integration of food and medicine is gaining momentum with the commercial availability of semaglutides, such as GLP-1 medications. These special-formulated food products promote natural GLP-1 responses to a meal or “pre-meal hunger support” products such as Nestlé’s Boost brand nutrition-



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➤ The integration of food and medicine is gaining momentum with the commercial availability of semaglutides.



➤ Tricking the body into feeling full is no longer a challenge now that GLP-1 is within reach for millions of obese individuals.

al drinks. Not only do they provide functional health benefits but also complement traditional macronutrients like premium proteins, dietary fiber, carbohydrates, and fats.

The same is true for Vital Pursuit Nestlé food products and the Protality brand of the Abbott company. Many of these food products feature no added sugar and aim to support consumers experiencing side effects commonly associated with semaglutide use. Since every individual's weight-loss and wellness journey is unique, personalized nutrition solutions must be tailored to meet these diverse needs and expectations.

Semaglutides like Novo Nordisk's Ozempic and Wegovy are now being linked to a broader spectrum of health benefits. The Economist magazine has dubbed semaglutide "the everything drug" for its potential in treating kidney disease, cardiovascular conditions, sleep apnea, and even Alzheimer's.

### Disrupting the Food Industry

The ease of weight loss enabled by GLP-1 medications, as compared to traditional programs, has taken the food industry by surprise. The *JAMA Cardiology* publication determined that some 137 million people in the US may be eligible for GLP-1 semaglutide medication, a market that is expected to represent a value of US\$150 billion by 2030. No doubt that the availability of GLP-1 medication will impact consumer spending on regular food and beverages, as these pharmaceutical products affect

eating habits such as protein quality, portion size, frequency, and taste preferences. This growing trend is poised to drive significant changes in consumer food preferences and purchasing patterns at supermarkets and restaurants. As a result, restaurants are expected to adapt by adding more healthful, low-calorie, nutrient-rich options to their menus, including dishes that are less spicy, salty, or sweet.

Nutrient-dense foods and protein supplements, including protein-fortified products, are quickly gaining traction in affluent societies among consumers using GLP-1 receptor agonists to support weight loss and overall wellness. These users gradually purchase less food due to reduced appetite and food intake. Spending reductions are particularly noticeable in high-sugar or high-fat snack foods. Instead, consumers are shifting their expenditures toward healthier options.

### Changing Spending Patterns

GLP-1 users are also influencing food-away-from-home spending by adjusting meal choices, tuning portion sizes, and modifying consumption patterns—often cutting back on breakfast or reducing dinner portions. For legacy food brands, fast-food restaurants, and supermarkets, this means catering to GLP-1 consumers with smaller portions, single-serving, portion-controlled packaging, and an emphasis on health and convenience.

Reduced grocery spending by GLP-1 users may hit the high-calorie food category hardest, while produce and lean meat

deli sections are likely to see increased demand. GLP-1 users are gravitating toward vegetables, fruits, and protein options while cutting back on sugary, salty, and highly processed products.

### Beyond Weight Loss

The initial FDA approval of semaglutide GLP-1 medicine dates back to 2005. Fast-forward to 2025, and it is estimated that about 1 in 8 US adults is using or has been using these prescription medications.

For a rapidly increasing number of people, GLP-1 medication to treat type 2 diabetes, obesity, and even cardiac events has become a lifesaver, including beneficial effects on cholesterol, heart rate, and heart inflammation. Beyond lowering blood sugar, GLP-1 medication has also been associated with other benefits such as improved metabolic health, neurological performance, and sleep apnea. There are also reports surfacing stating beneficial effects like curbing alcohol addiction, supporting cognitive function, and slowing conditions such as dementia and Parkinson's disease.

### Animal Protein for Muscle Preservation

Of the total weight loss, people who are on GLP-1 medication lose about 60% of their body fat and nearly 40% of their body muscle. For that reason, it is critical to use premium-quality protein sources to preserve muscle mass. Most of the active GLP-1 "patients" cite that animal protein-centric foods are preferred across all meals.

Lean beef, chicken meat, eggs, and protein-rich dairy foods such as cottage cheese and whey protein supplements used in fruit smoothies top the list as ideal dietary solutions. Animal protein sources have a much higher protein density and generally a superior amino acid pattern compared to plant proteins.

All these animal protein preferences are the result of consuming smaller portion sizes and the active suppression of cravings for sweet and salty snacks. Subsequently, the sale of foods high in salt, sugar, and fat is expected to decline. Morgan Stanley predicts that US supermarket sales will see a 1%-2% decrease in 2025. The same is about to happen when the GLP-1 medication becomes popular in other affluent countries and societies.

The growing demand by GLP-1 users for animal-based lean meat and fish reflects its popularity in high-quality protein-centered dietary intake. Lean chicken and beef, which provide 18% premium quality of protein, fit well in GLP-1's smaller portion sizes. After years of stagnant meat consumption in affluent countries, alongside the popularity of GLP-1 medication, the per capita lean meat consumption is on the rise again in the US. It looks like lean meat and fish are back in fashion for all those people who desperately want to improve their health and body weight. ▼

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