MILLHOUSE INTEGRATIVE
MEDICAL CENTRE
PARTNERING IN HEALTH AND HEALING

FACT SHEET 33 from September 2025

FIGHTING OBESITY with SEMAGLUTIDE

Weight control is often difficult. In our August 2025 ewsletter, we discussed the "survival switch" triggered by fructose - whether ingested or produced in the body - which stimulates cravings, impulsivity and hunger, while overriding normal satiety signals. I outlined the Switch Diet and its practical strategies for lowering body weight. In NZ in June 2025, ***Wegovy*** & ***Ozempic,*** both based on active ingredient semaglutide, were approved by Pharmac for certain conditions. Semaglutide is a GLP-1 receptor agonist and has been widely hailed as a self-injectable obesity treatment. The discussion below highlights key information about these medications.

WHAT ARE GLP-1 & GLP-1 AGONIST DRUGS?

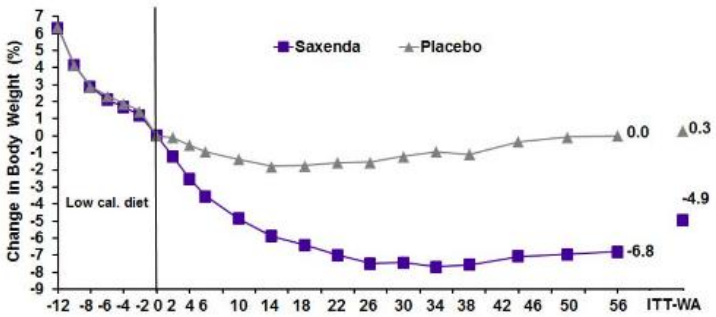
GLP-1 is a hormone - Glucagon-like-peptide-1**.** The gastrointestinal tract is the body's largest hormone-producing gland, releasing over 20 peptide hormones - amino acids linked together to form proteins. About 1 in 100 of the cells lining the digestive tract can identify and respond to nutrients by secreting hormones, including GLP-1. When we eat meals rich in fats and carbohydrates, GLP-1 is released from the lower small intestine and colon into the gut lumen and absorbed into the bloodstream. The hormone signals fullness, slows stomach-emptying, and reduces appetite, but is very quickly broken down.

In the 1990s, researchers discovered a compound in the saliva of the Gila Monster - a lizard from the southern deserts of USA and Mexico. This - that mimics GLP-1, but not its rapid breakdown. This compound was imitated in injectable medications (GLP-1 agonists) which "trick" the body's hunger signals and last for several hours. Recently, longer-acting injectables liraglutide and semaglutide were developed; oral versions are available in some countries.

HOW EFFECTIVE ARE GLP-1's?

GLP-1 receptor agonists like semaglutide are highly effective and lead to most participants in clinical trials losing weight – on average 10% for up to four years. One-third were classified as super-responders losing more than 20% of their body weight, but one in six participants had no significant weight loss; a few even gained weight.

Weight loss with GLP-1's plateau after about a year, even when injections are continued. This is because the body's feedback mechanisms gradually increase appetite, counteracting the initial appetite suppression that drives weight loss. As hunger returns and caloric intake increases, sometimes sharply, the combined effect of reduced energy expenditure and increased appetite counteracts the continued calorie restriction, causing weight loss to plateau. After stopping the medication, appetite typically returns to previous levels and weight is often regained.



SIDE EFFECTS & COST

There are other downsides. More than half of those prescribed GLP-1 drugs stopped taking them within a few months, primarily due to side effects. The most common are gastrointestinal issues - nausea, constipation and diarrhea – although these can be managed by starting with low doses, eating smaller meals, and staying well hydrated. However it is concerning that about 40% of the weight lost on these medications comes from muscle, though this can be minimized with resistance weight exercises. Serious side effects that occur in approximately 1% of users include acute pancreatitis, bowel obstruction, and thyroid cancer. When considering treatment options, it is important to weigh these risks against the significant health dangers posed by severe obesity. Cost is NZ$400-$500 per month.

BOOSTING GLP-1 WITH DIET AND LIFESTYLE

GLP-1 meds can increase blood levels of GLP-1 up to 1000 times normal, but since most of it binds to blood proteins, only a small amount is "free" and active. This is similar to natural levels in the gut. Gut-produced GLP-1, although quickly removed from the body, is believed to activate the vagus nerve. This sends appetite-reducing signals from your digestive system to the brain, so you feel fuller.

It's not just what you eat but how you eat that matters. Chewing food longer and eating more slowly boosts GLP-1 as does a high-fibre plant-based diet which also feeds healthy gut bacteria and slows digestion. Bitter foods—like dark leafy greens, bitter melon, grapefruit, hops, and certain herbs—activate special taste receptors in your gut that signal GLP-1 release and help you feel full. Vinegar, especially apple cider vinegar, contains acetic acid which can also help boost GLP-1 in the gut.

GLP-1 drugs have their place, but for best effect, combine them with a highly diverse, plant-based diet and thoughtful eating habits.

See also https://nutritionfacts.org/book/ozempic/