Anti-obesity medication or weight loss medications

Anti-obesity medication or weight loss medications are pharmacological agents that reduce or control weight. These medications alter one of the fundamental processes of the human body, weight regulation, by altering either appetite, or absorption of calories. The main treatment modalities for overweight and individuals with obesity remain dieting (healthy diet and caloric restriction) and physical exercise.

Because of potential side effects, and limited evidence of small benefits in weight reduction for children and adolescents with obesity, it is recommended that anti-obesity medications only be prescribed for obesity where it is hoped that the benefits of the treatment outweigh its risks. In the United States, the Food and Drug Administration advocates that people with either a body-mass index of at least 30, or a body-mass index of at least 27 with at least one weight-related comorbidity, represent a patient population with sufficiently high baseline health risks to justify the use of anti-obesity medication.

Anti-obesity medications may operate through one or more of the following mechanisms:

- GLP-1 analogues such as **tirzepatide** and **semaglutide** slow gastric emptying and also have neurologically-driven effects on appetite.
- Catecholamine releasing agents such as **phentermine,** and related substituted amphetamines (e.g., **bupropion)** which act as appetite suppressants are the main tools used for the treatment of obesity.
- **Orlistat** is an over the counter medication used to treat obesity. Its primary function is preventing the absorption of fats from the human diet by acting as a lipase inhibitor, thereby reducing caloric intake. It is intended for use in conjunction with a healthcare provider-supervised reduced-calorie diet.

Glucagon-like Peptide-1 Receptor Agonists, GLP-1

Our prescribers prescribe Glucagon-like Peptide-1 Receptor Agonists, GLP-1s for short—because research shows that when combined with lifestyle changes, they're the safest and most effective approach to achieve sustainable weight loss.

Our prescribers prescribe a variety of GLP-1s, including semaglutide & tirzepatide. These GLP-1s are often referred to by their brand name, so you may have heard of these medications as Wegovy®, Ozempic®, Mounjaro™, or Saxenda®,

All GLP-1s are clinically-tested, stimulant-free, and non-habit forming. GLP-1s address the underlying biology that is most important for weight loss, and help lower your set point, or the weight your body fights to stay at. GLP-1s are powerful, naturally-occurring hormones made by your gut that send signals to your brain to decrease your appetite, improve your metabolic system, and regulate your digestion so you can feel full longer and maximize nutrient absorption.

Your prescriber determines which medication is clinically appropriate for you.These medications work on your body's own receptors to decrease appetite, increase satiety, and regulate insulin and glucose. GLP-1s are proven to be most effective for metabolic health and weight loss.

GLP-1s are different from older classes of prescription weight loss medications (like phentermine) because they work on key underlying metabolic pathways to support sustained weight loss. They're not just another quick fix.

GLP-1s are clinically proven to reduce inflammation markers, leading to decreased inflammatory response and oxidative stress. CRP (C-reactive protein), a general inflammatory marker, is one marker we may follow during your Metabolic Reset.

GLP-1s slow how quickly food moves from the stomach to the intestines. This helps you feel full for longer by regulating sugar absorption in the intestine.

GLP-1s aid in shifting your body's set point (the weight your body fights to maintain) by impacting areas in the brain—to help curb cravings, make you feel full faster, and increase your energy expenditure.

GLP-1s regulate blood sugar levels by increasing insulin and decreasing glucagon—only when blood sugar levels are high. GLP-1s also improve whole-body energy metabolism by increasing insulin sensitivity of muscle cells and regulating fat cell development.

GLP-1s are generally very well tolerated, with limited side effects. Many individuals don't have any side effects at all. However, for those who do, nausea is the most common, and this typically resolves over the first few weeks. In the most recent clinical trials, at the highest dose, less than 5% of people discontinued GLP-1 medications because of side effects.

The GLP-1s are taken via an injection once a week. While an injection may sound scary, most members actually report injections being painless, quick, and easy. (It's just under the skin—going into your fat instead of your muscle.

Mechanism of action

Semaglutide is a glucagon-like peptide-1 receptor agonist. By mimicking the action of the incretin glucagon-like peptide-1 (GLP-1), it increases the production of insulin, the hormone which lowers the blood sugar level. It also appears to enhance growth of pancreatic beta cells, which are responsible for insulin production and release. Additionally, it inhibits the production of glucagon, the hormone that increases glycogenolysis (release of stored carbohydrate from the liver) and gluconeogenesis (synthesis of new glucose). It reduces food intake by lowering appetite and slowing down digestion in the stomach, helping to reduce body fat. It reduces hunger, food craving and body fat.

Adverse effects: Side effects include nausea, vomiting, diarrhea, abdominal pain, and constipation. In people with heart problems, it can cause damage to the retina of the eye (retinopathy). Other, less common side effects include kidney problems, allergic reactions, low blood sugar, and pancreatitis. Blood work needs to be done periodically when a patient is on these medications.

Contraindications: Due to data from rodents studies, the use is contraindicated in people with a personal or family history of medullary thyroid carcinoma and in patients with multiple endocrine neoplasia syndrome type

Phentermine

Mechanism of action:

The primary mechanism of action in treating obesity is the reduction of hunger perception, which is a cognitive process mediated primarily through several nuclei within the hypothalamus (in particular, the lateral hypothalamic nucleus, arcuate nucleus, and ventromedial nucleus). Outside the brain, phentermine releases norepinephrine and epinephrine causing fat cells to break down stored fat as well.

Contraindications

- Who have a history of drug abuse
- are allergic to sympathomimetic amine drugs
- are taking a monoamine oxidase inhibitor (MAOI) or have taken one within the last 14 days
- have cardiovascular disease, hyperthyroidism, or glaucoma
- are pregnant, planning to become pregnant, or breast-feeding.

Adverse effects:

Tolerance usually occurs; however, risks of dependence and addiction are considered negligible. People taking phentermine may be impaired when driving or operating machinery. Consumption of alcohol with phentermine may produce adverse effects.

- palpitations, tachycardia, high blood pressure, precordial pain; rare cases of stroke, angina, myocardial infarction, cardiac failure and cardiac arrest have been reported.
- overstimulation, restlessness, nervousness, insomnia, tremor, dizziness and headache; there are rare reports of euphoria followed by fatigue and nausea, vomiting, dry mouth, cramps, unpleasant taste, diarrhea, and constipation.
- Other adverse effects include trouble urinating, rash, impotence, changes in libido, and facial swelling.