



Weight Loss Agents

Updated: January 4, 2014.

OVERVIEW

While many agents have been developed to aid in weight loss, few have withstood critical assessment of safety and efficacy. Weight loss agents are held to a higher standard for safety and tolerability than medications for other conditions, because they are often used by otherwise healthy individuals driven more by concerns over appearance than health. Furthermore, all weight loss medications should be used as a part of a coordinated weight loss program that includes modification of behaviors, a reduced calorie diet and increased physical activity or exercise.

Currently used drugs for weight loss can be separated into those that suppress appetite (such as diethylpropion and phentermine) and those that block absorption of calories (orlistat). The anorexigenic agents currently used for weight loss are largely sympathomimetic agents (amphetamine, diethylpropion, and phentermine). Other classes of drugs that can affect appetite, but which are not all specifically approved for weight loss, include serotonin and norepinephrine reuptake inhibitors (bupropion, fenfluramine, fluoxetine), serotonin agonists (lorcaserin), GABAergic agents (topiramate, zonisamide) and cannabinoid antagonists (rimonabant). Sibutamine is unusual in having both sympathomimetic activity as well as blocking serotonin and norepinephrine reuptake. Sibutamine was withdrawn from use in the United States in 2010 because of concerns over increased risks for cardiovascular adverse events including myocardial infarction and stroke. In 2012, two weight loss agents were approved for use in the United States: a combination of phentermine and topiramate (Qsymia) and a serotonin agonist (Lorcaserin: Belviq). More recently, two new agents were approved: the first, a fixed dose combination of the antidepressant bupropion and the opioid receptor antagonist naltrexone which is marketed under the name Contrave; the second, the injectable glucagon-like peptide-1 (GLP-1) agonist liraglutide which is approved and used for type 2 diabetes (Victoza) was also approved for the additional indication of weight loss (Saxenda).

Drugs that suppress appetite generally affect appetite centers in the central nervous system (CNS) and can have other CNS effects such as nervousness, excitability, insomnia, mood changes, and headache. Drugs that affect absorption of nutrients often have other gastrointestinal side effects such as diarrhea, flatulence and abdominal bloating. Liver injury is rare with all of the currently approved medications for weight loss. In contrast, serious hepatotoxicity has been linked to several over the counter and herbal preparations promoted as helping with weight loss (usnic acid, ephedra, Plethoryl).

The following weight loss agents are discussed individually:

- [Bupropion](#)
- [Diethylpropion](#)
- [Liraglutide](#)
- [Lorcaserin](#)

- Naltrexone
- Orlistat
- Phentermine
- Phentermine-Topiramate
- Sibutramine