

## Weight Loss Products

(Modified May 2023)

Multiple products are approved for weight loss. For information about patients requiring bariatric surgery for weight loss, see our chart, *Bariatric Surgery and Medication Use*. The chart below reviews pertinent information about use of **approved weight-loss products**, including dosing, expected weight loss, cost, and considerations for use.

| Product <sup>a,f</sup>   | Usual Dose <sup>a</sup>   | Mean Weight Loss <sup>a,b</sup>   | Cost <sup>c</sup> and Considerations for Use <sup>a</sup>   |
|--|---|---|---|
| <b>Products that work as a sympathomimetic, anorectic, or to reduce appetite<sup>d</sup></b> <ul style="list-style-type: none"> <li>Avoid late evening dosing to prevent insomnia.</li> <li>Products are schedule C-IV: avoid abrupt discontinuation to prevent withdrawal symptoms, especially with higher doses or prolonged use.</li> </ul> |   |   |   |
| <b>Diethylpropion</b><br>(generics, U.S. only)   | <ul style="list-style-type: none"> <li>For short-term use (a few weeks)<sup>e</sup> in patients 16 years and older:             <ul style="list-style-type: none"> <li>○ <b>IR:</b> 25 mg PO TID one hour before meals or QID (TID plus mid-evening dose).</li> <li>○ <b>CR:</b> 75 mg once daily mid-morning.</li> </ul> </li> <li>Discontinue if tolerance develops or if not effective after four weeks (e.g., &lt;1.8 kg [4 pounds] lost).</li> </ul>                         | <ul style="list-style-type: none"> <li>~<b>3 kg (6.6 pounds)</b><br/>(75 mg once daily at six weeks to 12 months)<sup>1</sup></li> </ul>  | <ul style="list-style-type: none"> <li>Cost: ~\$1.25/day</li> <li>Monitor for increases in BP and HR.</li> <li><b>Discontinuation rate due to adverse effects:</b> unknown.</li> </ul>  |
| <b>Phentermine</b><br>(U.S. only: <i>Adipex-P</i> , generics; <i>Lomaira</i> )   | <ul style="list-style-type: none"> <li>For short-term use (a few weeks)<sup>e</sup> in patients 17 years and older:             <ul style="list-style-type: none"> <li>○ <b>Adipex-P:</b> 37.5 mg PO once daily before breakfast OR one to two hours after breakfast.</li> <li>○ <b>Lomaira:</b> 8 mg PO TID 30 minutes before meals.</li> </ul> </li> <li>Discontinue if tolerance develops or if not effective after a few weeks (e.g., &lt;1.8 kg [4 pounds] lost).</li> </ul> | <ul style="list-style-type: none"> <li><b>Adipex-P:</b> <ul style="list-style-type: none"> <li>~<b>3.6 kg (8 pounds)</b><br/>(15 to 30 mg once daily at two to 24 weeks)<sup>1</sup></li> <li>~97% of patients met weight loss goal (≥5%) at one year compared to 80% with placebo.<sup>3</sup></li> </ul> </li> <li><b>Lomaira:</b> unknown (assumed similar to other phentermine products)</li> </ul> | <ul style="list-style-type: none"> <li>Cost:             <ul style="list-style-type: none"> <li>○ <i>Adipex-P</i>: &lt;\$1/day</li> <li>○ <i>Lomaira</i>: ~\$1.50/day</li> </ul> </li> <li>Monitor for increases in BP and HR.</li> <li><b>Discontinuation rate due to adverse effects:</b> unknown.</li> </ul> |

| Product <sup>a,f</sup>   | Usual Dose <sup>a</sup>   | Mean Weight Loss <sup>a,b</sup>   | Cost <sup>c</sup> and Considerations for Use <sup>a</sup>  |
|--|---|---|--|
| <b>Products that work as a sympathomimetic, anorectic, or to reduce appetite,<sup>d</sup> continued</b>  |   |   |  |
| <b>Phentermine/<br/>topiramate ER</b><br>( <i>Qsymia</i> , U.S. only)<br>Provide a MedGuide with each Rx.<br>Pharmacies must enroll and be certified to dispense. REMS info at <a href="http://www.qsymiarems.com">www.qsymiarems.com</a> .  | For patients 12 years and older: <ul style="list-style-type: none"> <li>Start with 3.75 mg/23 mg PO once daily in the morning x 14 days, then double the morning dose. See product labeling for additional dosage adjustments based on weight loss.</li> <li>Discontinue after 12 weeks at max dose if &lt;5% weight loss achieved.</li> </ul>  | <ul style="list-style-type: none"> <li>~9 kg (19 pounds) (15 mg/92 mg once daily at one year)</li> <li>~70% of patients met weight loss goal (≥5%) at one year compared to 21% with placebo.</li> </ul>   | <ul style="list-style-type: none"> <li>Cost: ~\$6.50/day</li> <li>Monitoring for (due to topiramate):               <ul style="list-style-type: none"> <li>reduced sweating/increased body temperature, especially with physical activity/hot weather.</li> <li>pregnancy test (baseline and monthly) due to risk of birth defects.</li> <li>worsening depression and/or suicidal thoughts/behaviors.</li> <li>inadequate fluid intake, risk of kidney stones.</li> </ul> </li> <li><b>Discontinuation rate due to adverse effects:</b> one out of every 14 patients.</li> </ul> |
| <b>Products that work as a glucagon-like peptide-1 (GLP-1) receptor agonist to reduce appetite and food/calorie intake</b> <ul style="list-style-type: none"> <li>Monitor blood glucose and for signs and symptoms of pancreatitis.               <ul style="list-style-type: none"> <li>Discontinue if pancreatitis is suspected. Do not restart if pancreatitis is confirmed.</li> <li>Don't combine with other GLP-1 agonists. Generally, avoid use in patients taking a dipeptidylpeptidase-4 inhibitor (e.g., saxagliptin), as combining these two classes of medications is unlikely to improve weight loss and is not cost-effective.<sup>11</sup></li> </ul> </li> </ul> |   |   |  |
| <b>Liraglutide</b><br>( <i>Saxenda</i> )<br>Provide a MedGuide with each Rx (U.S.)   | For patients 12 years and older: <ul style="list-style-type: none"> <li>3 mg subcutaneously <b>once daily</b> (start with 0.6 mg once daily, increase dose weekly by 0.6 mg to goal of 3 mg once daily).</li> <li>For adults, discontinue after 16 weeks if &lt;4% (after 12 weeks if &lt;5% [Canada]) weight loss achieved.</li> </ul>   | <ul style="list-style-type: none"> <li>~3.7 to 5.2 kg (8.1 to 11.4 pounds) (3 mg once daily at 56 weeks)</li> <li>~44% to 62% of patients met weight loss goal (≥5%) at 56 weeks compared to 16% to 34% with placebo.</li> </ul>                                | <ul style="list-style-type: none"> <li>Cost:               <ul style="list-style-type: none"> <li>U.S.: ~\$45/day</li> <li>Canada: ~\$14/day</li> </ul> </li> <li><b>Discontinuation rate due to adverse effects:</b> one out of every 18 patients.</li> </ul>   |
| <b>Semaglutide</b><br>( <i>Wegovy</i> )*<br>Provide a MedGuide with each Rx<br><br>*Approved in Canada, but not yet marketed at time of publication.   | For patients 12 years and older (18 years and older in Canada): <ul style="list-style-type: none"> <li>2.4 mg subcutaneously <b>once weekly</b> (start with 0.25 mg once weekly, increase dose every four weeks to 0.5 mg, 1 mg, 1.7 mg, and 2.4 mg).</li> <li>Though no specific guidance is available, stopping after 12 weeks if &lt;5% weight loss achieved is reasonable based on the guidelines.<sup>4</sup></li> </ul> | <ul style="list-style-type: none"> <li>~10.6 to 12.7 kg (22 to 27 pounds) (2.4 mg once weekly at one year)<sup>2,10</sup></li> <li>67% to 85% of patients met weight loss goal (≥5%) at 52 weeks compared to 30% to 48% with placebo.<sup>2,10</sup></li> </ul> | <ul style="list-style-type: none"> <li>Cost:               <ul style="list-style-type: none"> <li>U.S.: ~\$340/week (once weekly dosing)</li> <li>Canada: pricing not yet available at time of publication</li> </ul> </li> <li><b>Discontinuation rate due to adverse effects:</b> one out of every 28 patients.</li> </ul>   |

| Product <sup>a,f</sup>  | Usual Dose <sup>a</sup>  | Mean Weight Loss <sup>a,b</sup>  | Cost <sup>c</sup> and Considerations for Use <sup>a</sup>  |
|---|--|--|--|
| <b>Product that works to inhibit GI lipase to prevent fat absorption</b>                                      |  |  |  |
| <b>Orlistat</b><br><i>(Xenical)</i><br><i>(Alli</i> [over-the-counter (OTC); U.S. only])                      | <ul style="list-style-type: none"> <li>For patients <b>12 years and older</b>:             <ul style="list-style-type: none"> <li>○ <i>Xenical</i>: 120 mg PO TID with each main meal containing fat (and a diet with ~30% of calories from fat).</li> </ul> </li> <li>For patients <b>18 years and older</b>:             <ul style="list-style-type: none"> <li>○ <i>Alli</i>: 60 mg PO up to TID with meals containing fat.</li> </ul> </li> <li>Recommend an MVI with A, D, E, K, and beta-carotene at bedtime or <b>≥2 hours before or after</b> orlistat.</li> </ul> | <b><i>Xenical</i> (120 mg TID):</b> <ul style="list-style-type: none"> <li>• <b>3.45 kg (7.6 pounds)</b> at one year</li> <li>• 36% to 55% of patients met weight loss goal (≥5%) at one year compared to 16% to 27% with placebo.</li> </ul> <b><i>Alli</i> (60 mg TID): ~2 kg (~4.4 pounds)</b> at 24 weeks <sup>7</sup> | <ul style="list-style-type: none"> <li>• Cost:             <ul style="list-style-type: none"> <li>○ U.S.: ~\$23/day (<i>Xenical</i>); \$1.40/day (<i>Alli</i>)</li> <li>○ Canada: ~\$5/day (<i>Xenical</i>)</li> </ul> </li> <li>• May reduce absorption of vitamin K and certain meds. See product labeling for specifics (e.g., timing, monitoring, dose adjustments).</li> <li>• Recommend additional contraception if patients experience severe diarrhea (possible reduced absorption of oral contraceptives [Canadian labeling]).</li> <li>• <b>Discontinuation rate for <i>Xenical</i> due to adverse effects:</b> one out of every 26 patients.</li> </ul> |
| <b>Product that works to reduce appetite and cravings<sup>9</sup></b>   |  |  |  |
| <b>Naltrexone 8 mg/ bupropion 90 mg ER</b><br><i>(Contrave)</i><br><br>Provide a MedGuide with each Rx (U.S.) | For patients 18 years and older: <ul style="list-style-type: none"> <li>• 2 tabs PO BID (start with 1 tab once daily, increase by 1 tab weekly to target dose).             <ul style="list-style-type: none"> <li>○ Avoid taking with a high-fat meal to minimize seizure risk.</li> </ul> </li> <li>• Discontinue after 12 weeks at full dose if &lt;5% weight loss achieved.</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>≤4.1 kg (9 pounds)</b> (16 mg/180 mg BID at 56 weeks)</li> <li>• 36% to 57% of patients met weight loss goal (≥5%) at 56 weeks compared to 17% to 43% with placebo.</li> </ul>   | <ul style="list-style-type: none"> <li>• Cost: ~\$10/day (U.S. and Canada)</li> <li>• Associated with CYP drug interactions. See product labeling for specifics.</li> <li>• Avoid in patients taking opioids (due to naltrexone).</li> <li>• Monitor for increases in BP, HR, and suicidal thoughts/behavior (due to bupropion).</li> <li>• <b>Discontinuation rate due to adverse effects:</b> one out of every nine patients.</li> </ul>   |
| <b>Product that works as a melanocortin 4 (MC4) receptor agonist to reduce appetite</b>                       |  |  |  |
| <b>Setmelanotide</b><br><i>(Imcivree, U.S. only)</i>  | <ul style="list-style-type: none"> <li>• For patients <b>6 to 11 years old</b>:             <ul style="list-style-type: none"> <li>○ 1 to 2 mg subcutaneously once daily (dose based on tolerability).</li> </ul> </li> <li>• For patients <b>12 years and older</b>:             <ul style="list-style-type: none"> <li>○ 2 to 3 mg subcutaneously once daily (dose based on tolerability).</li> </ul> </li> <li>• Discontinue after 12 to 16 weeks at full dose if &lt;5% weight loss achieved.</li> </ul>   | <ul style="list-style-type: none"> <li>• 80% of patients with POMC or PCSK1 deficiency or 46% of patients with LEPR deficiency achieved ≥10% weight loss at one year.</li> </ul>   | <ul style="list-style-type: none"> <li>• Cost: not available at time of publication</li> <li>• Approved in patients with <b>obesity due to genetic testing confirmed-deficiency of one of the following</b>:             <ul style="list-style-type: none"> <li>○ proopiomelanocortin (POMC)</li> <li>○ proprotein convertase subtilisin/kexin type 1 (PCSK1)</li> <li>○ leptin receptor (LEPR)</li> </ul> </li> <li>• <b>Discontinuation rate due to adverse effects:</b> unknown.</li> </ul>   |

| Product <sup>a,f</sup>  | Usual Dose <sup>a</sup>  | Mean Weight Loss <sup>a,b</sup>   | Cost <sup>c</sup> and Considerations for Use <sup>a</sup>  |
|---|--|---|--|
| <b>Product (nonabsorbable cellulose/citric acid hydrogel) that works to promote a sense of fullness by occupying space in the stomach</b>   |  |   |  |
| <p><i>Plenity</i>, U.S. only</p> <p>Particles absorb water in the stomach to create sense of fullness. The water is reabsorbed in the colon and the particles are eliminated via bowel movements.</p> <p>Note: <i>Plenity</i> is <b>considered a device, not a drug</b>, because it is not absorbed or metabolized by the body.</p> | <p>Only available through telehealth visits<sup>g</sup> (<a href="https://www.myplicity.com/">https://www.myplicity.com/</a>) for patients 18 years and older:</p> <ul style="list-style-type: none"> <li>• 2.25 grams (3 capsules) PO BID 20 to 30 minutes before lunch and dinner <b>with 16 oz of water</b>. <ul style="list-style-type: none"> <li>○ If a pre-meal dose is missed, take the dose during or immediately after the meal.</li> </ul> </li> <li>• Consider discontinuing after eight weeks if &lt;3% weight loss achieved (unlikely to be effective).<sup>5</sup></li> </ul> | <ul style="list-style-type: none"> <li>• ~2% at six months (~2 kg [~4 pounds] for a 200-pound person at baseline)</li> <li>• ~59% patients met weight loss goal (5%) at six months compared to 42.2% with placebo.</li> </ul> | <ul style="list-style-type: none"> <li>• Cost: \$3.50/day (~\$1.75/meal).<sup>6</sup></li> <li>• Expanded particles occupy ~25% of the stomach.</li> <li>• The effect of <i>Plenity</i> on most meds is unknown. <ul style="list-style-type: none"> <li>○ Maximally separate once-daily meds from <i>Plenity</i> by taking them in the morning or at bedtime.</li> <li>○ Meds that should be taken with food should be taken AFTER starting the meal.</li> </ul> </li> <li>• Avoid use in patients with certain GI abnormalities or conditions. See product labeling for a complete list.</li> <li>• GI adverse effects are common (e.g., diarrhea, bloating, nausea, vomiting, constipation).<sup>2</sup></li> <li>• <b>Discontinuation rate due to adverse effects:</b> appears similar to placebo.</li> </ul> |

- a. **Information from product labeling, unless otherwise noted. U.S. product labeling:** diethylpropion extended-release (Lannett Company, December 2019); diethylpropion hydrochloride tablet (KVK-tech, December 2018); *Adipex-P* (September 2020); *Lomaira* (December 2018); *Saxenda* (December 2020); *Wegovy* (December 2022); *Xenical* (January 2018); *Alli* (November 2020); *Contrave* (August 2020); *Qsymia* (June 2022); *Imcivree* (November 2020); *Plenity* (April 2019). **Canadian product labeling:** *Saxenda* (February 2021); *Xenical* (September 2017); *Contrave* (May 2020).
- b. Mean weight loss with lifestyle changes and/or diet. Weight loss is the amount above that seen with placebo. Weight loss varies based on lifestyle modification, baseline weight, etc.
- c. Pricing (for generic when available) based on wholesale acquisition cost (WAC). U.S. medication pricing by Elsevier, accessed July 2021. Discount programs may be available for some drugs.
- d. Older amphetamines indicated for weight loss (e.g., benzphetamine [U.S.], methamphetamine [U.S.], phendimetrazine [U.S.]) are not included in the chart. However, adverse effects, contraindications, and cautions are similar to diethylpropion and phentermine. Product labeling should be consulted for more specific information.
- e. Though product labeling may specify use should be limited to a few weeks, guidelines suggest that if weight loss from an approved medication is at least 5% at 12 weeks, medications can be continued.<sup>4</sup>
- f. Lorcaserin (*Belviq*, *Belviq XR*, U.S. only) was withdrawn from the market (February 2020) due to increased occurrence of cancer in clinical trials.<sup>8</sup>
- g. *Plenity* is anticipated to be available outside of these telehealth visits sometime during 2021.

**Abbreviations:** GI = gastrointestinal; BID = twice daily; BP = blood pressure; CR = controlled-release; ER = extended-release; HR = heart rate; IR = immediate-release; PO = orally; TID = three times daily; QID = four times daily.

*Users of this resource are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national organizations. Information and internet links in this article were current as of the date of publication.*

## References

1. Li Z, Maglione M, Tu W, et al. Meta-analysis: pharmacologic treatment of obesity. *Ann Intern Med* 2005;142:532-46.
2. Wilding JPH, Batterham RL, Calanna S, et al. Once-weekly semaglutide in adults with overweight or obesity. *N Engl J Med* 2021;384:989.
3. Hendricks EJ, Greenway FL, Westman EC, Gupta AK. Blood pressure and heart rate effects, weight loss and maintenance during long-term phentermine pharmacotherapy for obesity. *Obesity (Silver Spring)* 2011;19:2351-60.
4. Apovian CM, Aronne LJ, Bessesen DH, et al. Pharmacological management of obesity: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 2015;100:342-62.
5. MyPlenity.com. Weight management without deprivation. <https://www.myplenity.com/healthcare-professionals>. (Accessed July 7, 2021).
6. MyPlenity.com. Frequently asked questions. <https://www.myplenity.com/faq>. (Accessed July 7, 2021).
7. Smith SR, Stenlof KS, Greenway FL, et al. Orlistat 60 mg reduces visceral adipose tissue: a 24-week randomized, placebo-controlled, multicenter trial. *Obesity (Silver Spring)* 2011;19:1796-803.
8. FDA. FDA drug safety communication. FDA requests the withdrawal of the weight-loss drug *Belviq*, *Belviq XR* (lorcaserin) from the market. February 13, 2020. <https://www.fda.gov/media/135189/download>. (Accessed July 7, 2021).
9. Caixas A, Albert L, Capel I, Rigla M. Naltrexone sustained-release/bupropion sustained-release for the management of obesity: review of the data to date. *Drug Des Devel Ther* 2014;8:1419-27.
10. Wadden TA, Bailey TS, Billings LK, et al. Effect of subcutaneous semaglutide vs placebo as an adjunct to intensive behavioral therapy on body weight in adults with overweight or obesity: the STEP 3 randomized clinical trial. *JAMA* 2021;325:1403-13.
11. Lajthia E, Bucheit JD, Nadpara PA, et al. Combination therapy with once-weekly glucagon like peptide-1 receptor agonists and dipeptidyl peptidase-4 inhibitors in type 2 diabetes: a case series. *Pharm Pract (Granada)* 2019;17:1588.

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