# Obesity Pharmacotherapy – As of January 2024

**1. Who is a candidate for pharmacotherapy?**

Per 2023 guidelines, a pediatric patient who ≥ 12 years of age and who has obesity (BMI ≥ 95th percentile) may be considered for obesity pharmacotherapy[1]. Patients younger than 12 can be considered for off-label therapy. Patients should continue lifestyle behavior changes during drug therapy in order to see efficacious effects of the pharmacotherapy.

**2. Do they have to have lifestyle therapy beforehand?**

Not necessarily. Lifestyle modifications can (and should) be implemented concurrently. However, some insurance companies will require documentation of prior lifestyle therapy. Treatment failure does not have to occur in the prescribing physician's care. Prescribers should document the past efforts of the family.

**3. When should children be considered for metabolic and bariatric surgery program referrals?**

Referral to metabolic and bariatric surgery programs can begin at age 13 for children with severe obesity (a BMI ≥ 120% of the 95th percentile).

**4. What medications are available?**

Below is a table summarizing the FDA approved medications for obesity. Metformin, stimulants, topiramate, and phentermine have all be used off-label. These off-label drugs are not included in the table below (except for metformin).

| | Trade Names (for Obesity) | Dose | Main Side Effects (>10%) | | Effectiveness in Clinical Trials* (rounded to the nearest tenth) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Weight Change (kg±SD) | BMI Change (kg/m²±SD) | BMI Change (% Subjects) -5% | BMI Change (% Subjects) -10% |
| **FDA APPROVED (for 12 years and older with BMI ≥ 95th percentile)** | | | | | | | | |
| **Liraglutide[2#]** | Saxenda | Titrate to max 3.0mg/day[a] Subcutaneous | Vomiting, nausea, diarrhea, hypoglycemia, gastroenteritis, dizziness | Drug | -2.7±9.1 | -1.6±3.1 | 43.3 | 26.1 |
| | | | | Placebo | +2.1±10.2 | +0.1±3.4 | 18.7 | 8.1 |
| **Orlistat[3]** | Xenical | 120mg TID (within 1 hour of meals) Orally | Steatorrhea, flatus with discharge, fecal urgency, fatty/oily stool | Drug | +0.5 | -0.6 | 26.5 | 13.3 |
| | | | | Placebo | +3.1 | +0.3 | 15.7 | 13.3 |
| **Phentermine/ Topiramate (Phen/Tpm)[4]** | Qsymia | Titrate to max 15mg/92mg[b] orally | Paraesthesia, drymouth, constipation, upper respiratory tract infection, headache | Drug | -9.2±0.9 | -4.2±0.3 | 46.9 | 42.5 |
| | | | | Placebo | +6.5±1.3 | +1.2±0.5 | 5.4 | 0 |
| **Semaglutide[5#]** | Wegovy | Titrate to max 2.4mg/week subcutaneous[c] | Nausea, diarrhea, vomiting, abdominal pain, constipation, headache, fatigue | Drug | -15.3 | -5.8 | 75.6 | 64.7 |
| | | | | Placebo | +2.4 | +0.1 | 15.5 | 8.6 |
| **NOT FDA APPROVED** | | | | | | | | |
| **Metformin[6]** | | Titrate to max 2000mg/day with Extended release or 1000mg/day BID Orally[d] | Diarrhea, nausea, vomiting, flatulence | Drug | NR | -0.9±0.5 | NR | NR |
| | | | | Placebo | NR | +0.2±0.5 | NR | NR |

*All Clinical trials included lifestyle treatment in conjunction with their drug treatment; NR, not reported

# Contraindicated if personal or family history of MEN

[a] Liraglutide titration: 0.6mg/day x 7d; 1.2mg/day x 7d; 1.8mg/day x 7d; 2.4mg/day x 7d

[b] Phentermine/topiramate titration (Phen/tpm): 3.75/23mg/d x 14 d; 7.5/46mg/d x 14 d; If a pediatric patient hasn't lost at least 3% of BMI after12 weeks on the dose, further titrate to 11.25/69mg/d x 14d and then to 15/92mg/d

[c] Semaglutide titration: 0.25mg/week x 4 weeks; 0.5 mg/week x 4 weeks; 1.0mg/week x 4 weeks; 1.7 mg/week x 4 weeks

[d] Metformin titration: 500mg/d x 7 days; 1000mg/d x 7d; 1500mg/d x 7d

**References**


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