

Anti-Obesity Medication Update

for Dietetic and Nutrition Professionals

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PRESENTED BY
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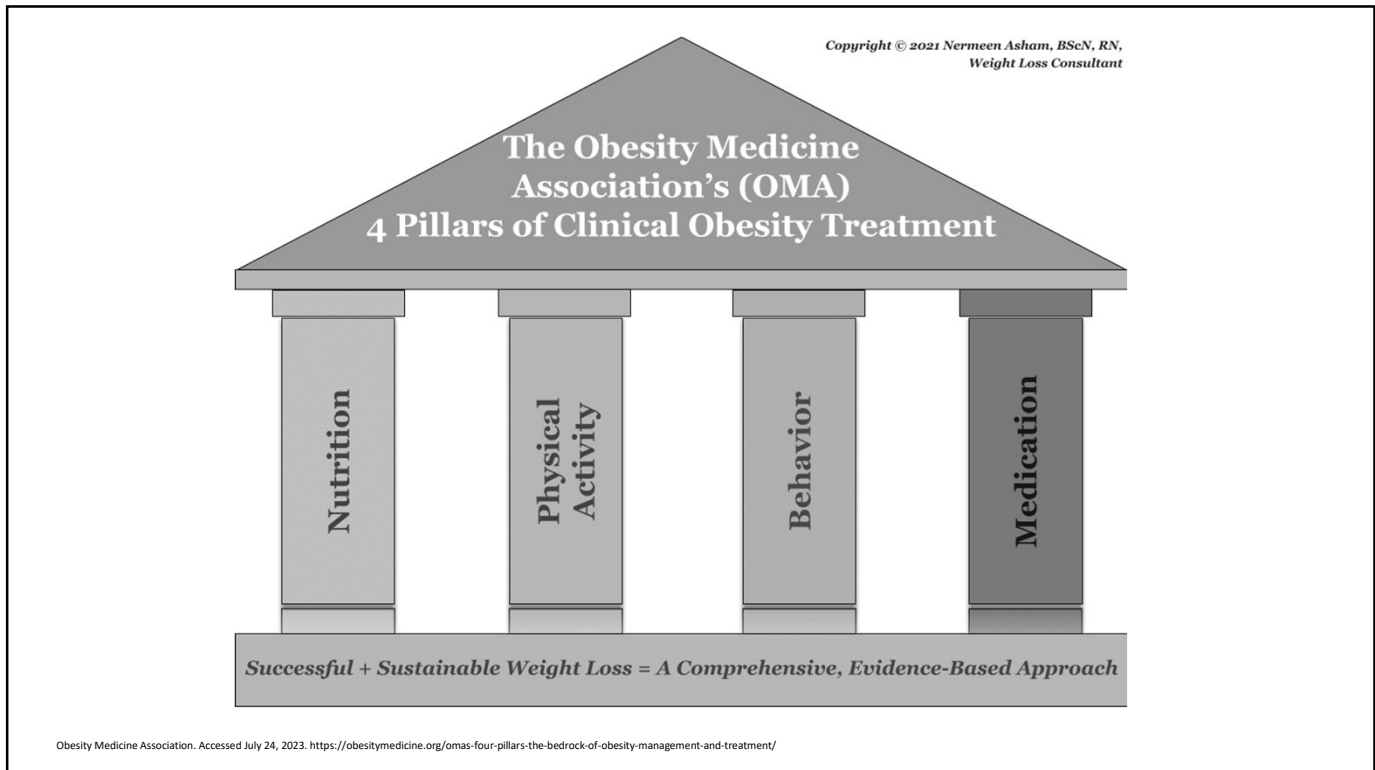
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Learning Objectives

1. Summarize the chronic care model for the treatment of obesity.
2. Describe key FDA-approved and off-label medications used in obesity management.
3. Integrate practical strategies for designing nutrition plans and collaborating with interdisciplinary teams to improve patient outcomes in obesity care.



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Obesity is a Disease When

The patient has excessive body fat, confirmed by reliable measures.

Causes include genetic/developmental factors, infections, hypothalamic injury, medication effects, energy imbalance, and environmental influences.

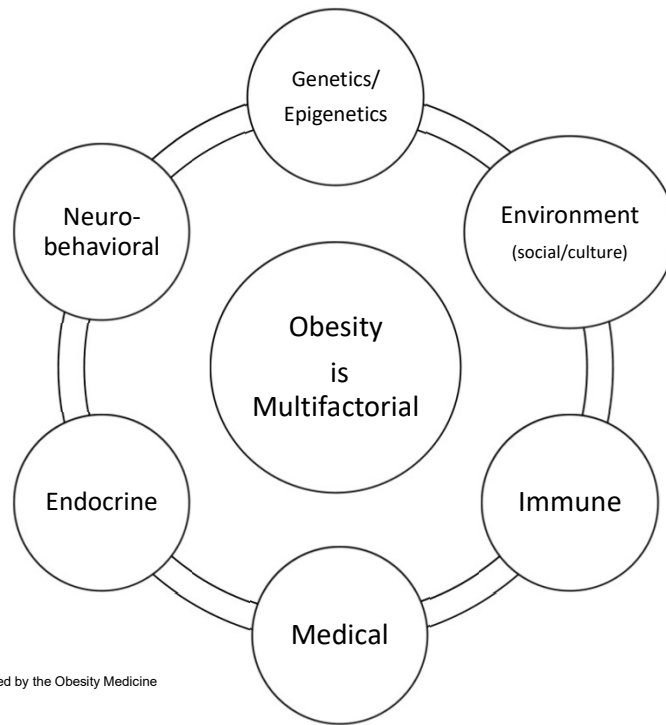
Excessive body fat leads to structural and functional abnormalities, increasing morbidity and mortality.

Adipocyte and adipose tissue dysfunction contribute to metabolic disease ("sick fat" disease).

Pathologic physical forces from excess fat mass damages other tissues ("fat mass disease").

Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

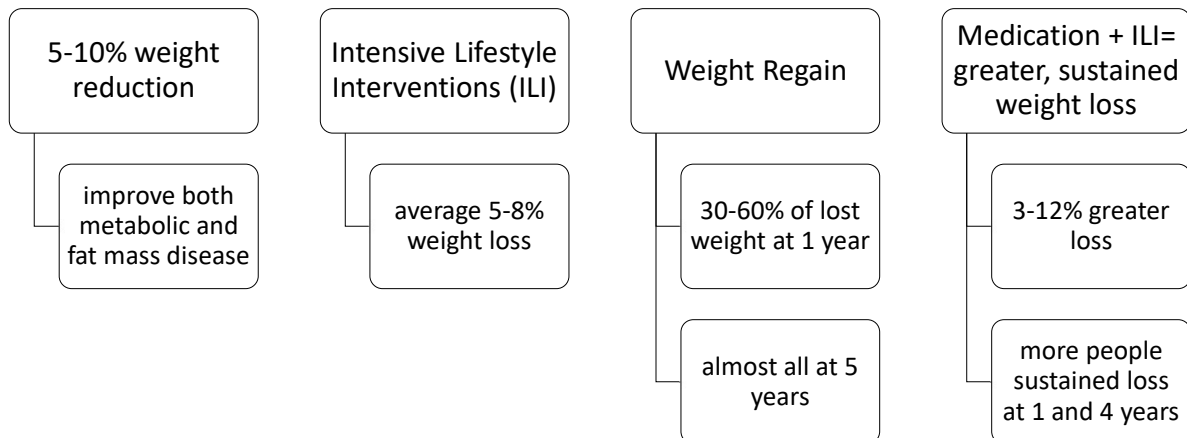
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Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

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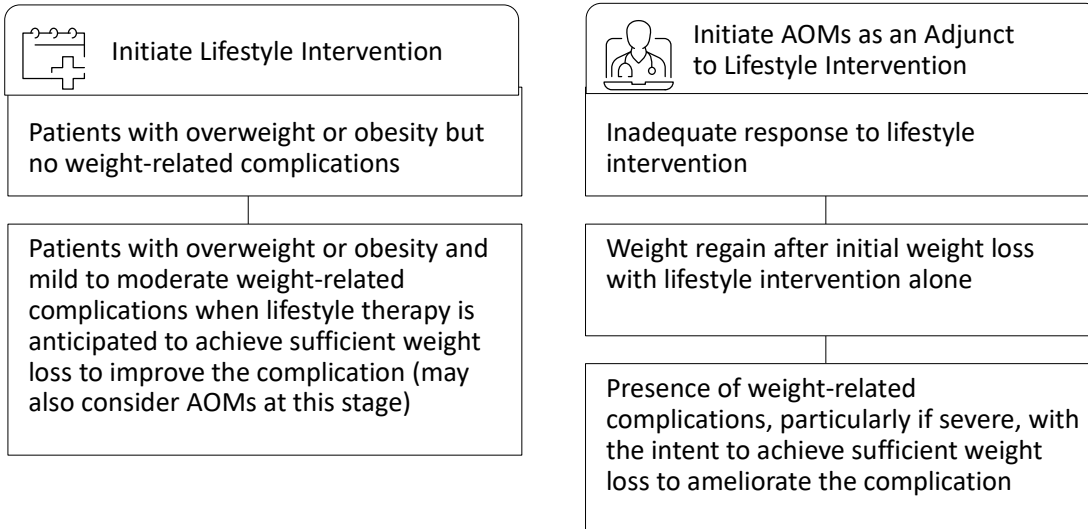
Weight Loss & Weight Loss Maintenance



Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

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Why Use Anti-Obesity Medications (AOM)



BMI, body mass index.

1. Garvey, et al. *Endocr Pract.* 2016;22:1-203. 2. Grunwald E, et al. *Gastroenterol.* 2022;163(5):1198-1225. 3. Apovian CM, et al. *JCEM.* 2015;100(2):342-362.

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FDA-approved Anti-obesity Medication Indications

- Patients with obesity (e.g., BMI > 30kg/m²)
- Patients with overweight (e.g., BMI > 27kg/m²) with presence of a weight related complication (e.g., type 2 diabetes mellitus, hypertension, dyslipidemia)
- Adjunct to reduced calorie diet and increased physical activity
- Contraindicated in patients hypersensitive to the drugs

Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

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FDA- approved Anti-obesity Pediatric Medication Indications

Pediatric patients aged 12 years and older with an initial BMI at the 95th percentile or greater for age and sex (obesity)

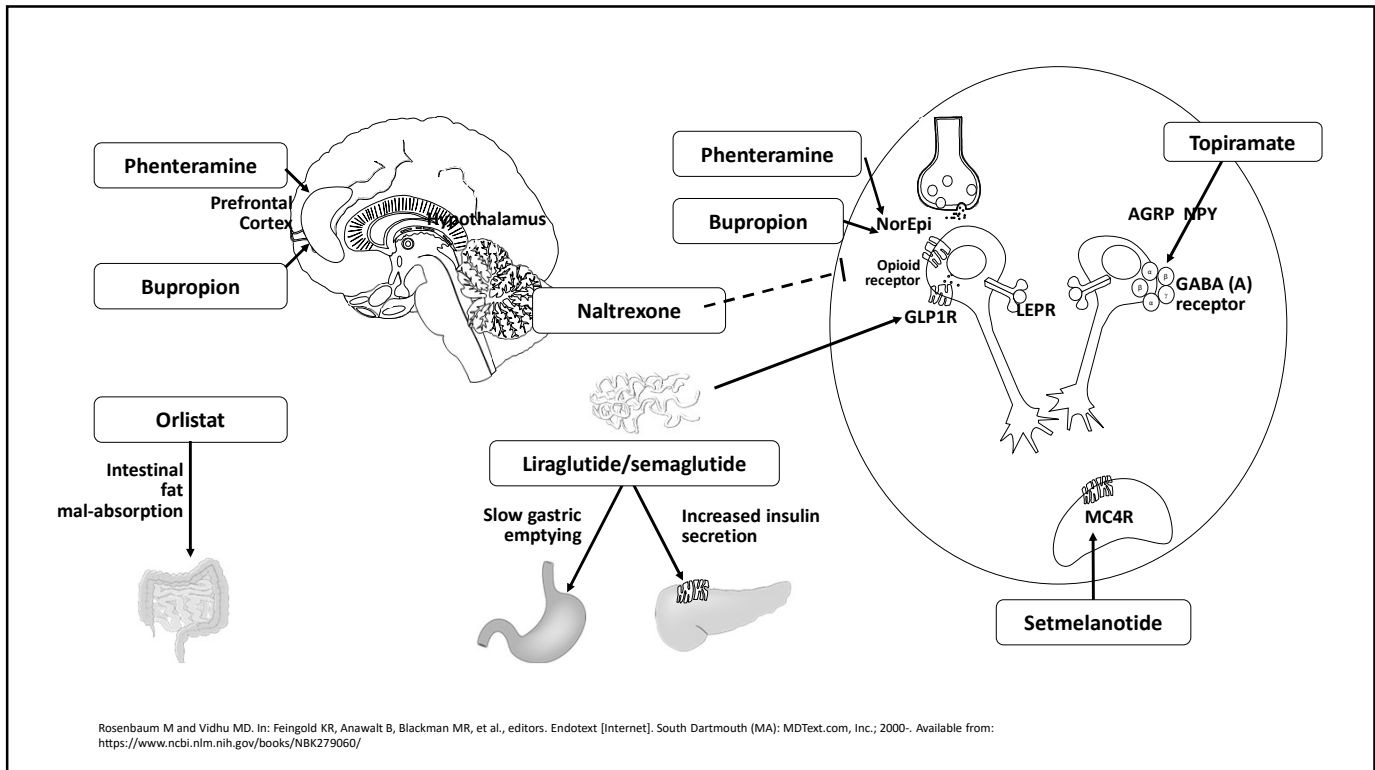
Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

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Anti-Obesity Medications FDA Indicated



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FDA Indicated for Short-Term Use

Sympathomimetic Amines

- Phentermine (DEA Schedule IV); 15mg, 30 mg, 37.5 mg(cap), 8mg, 37.5 mg (tab)
- Diethylpropion (DEA Schedule IV) 25 mg, 75 mg ER
- Phendimetrazine (DEA Schedule III) 35 mg tab, 105 mg ER cap
- Benzphetamine (DEA Schedule III) 25mg, 50 mg
- **Indication:** Short term use (a few weeks) as adjunct to a weight reduction regimen
- **MOA:** Norepinephrine-releasing agent; anorexic agent
- **Weight Loss Efficacy:** 3-8% in controlled clinical trials; 4-19% in retrospective medical chart reviews

MOA, mechanism of action.
Cornier, M. *Am J Manag Care*. 2022;28(Suppl 15):S288-S296.

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FDA Indicated for Short-Term Use

Potential Adverse Reactions

- Palpitation
- Tachycardia
- Increased blood pressure
- Overstimulation
- Tremor
- Dizziness
- Insomnia
- Dysphoria
- Headache
- Dryness of mouth
- Dysgeusia
- Diarrhea
- Constipation

Contraindications/Cautions

- Hypersensitivity & Pregnancy / Nursing
- History of cardiovascular disease (e.g., coronary artery disease, stroke, arrhythmias, congestive heart failure, uncontrolled hypertension)
- Administration during or within 14 days following the administration of monoamine oxidase inhibitors
- Hyperthyroidism
- Glaucoma
- Agitated states
- History of drug abuse

1. Cornier, M. *Am J Manag Care*. 2022;28(Suppl 15):S288-S296. 2. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

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Original Article
CLINICAL TRIALS AND INVESTIGATIONS

Obesity

Safety and Effectiveness of Longer-Term Phentermine Use: Clinical Outcomes from an Electronic Health Record Cohort

Kristina H. Lewis^{1,2}, Heidi Fischer³, Jamy Ard¹, Lee Barton³, Daniel H. Bessesen⁴, Matthew F. Daley⁵, Jay Desai⁶, Stephanie L. Fitzpatrick⁷, Michael Horberg⁸, Corinna Koebnick³, Caryn Oshiro⁹, Ayae Yamamoto³, Deborah R. Young³, and David E. Arterburn¹⁰

Lewis KH, et al. *Obesity (Silver Spring)*. 2019;27(4):591-602

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Longer-term Phentermine Use

13,972 adults with phentermine use 2010-2015

- Short-term (reference group)
- Short-term intermittent
- Medium-term continuous
- Medium term intermittent
- Long-term continuous

Effectiveness

- Percent change in weight from baseline at 6, 12, 24 months

Safety

- Change in blood pressure
- CV Risk-incidence of myocardial infarction, stroke, angina, CABG, carotid artery intervention, or death

Lewis KH, et al. *Obesity (Silver Spring)*. 2019;27(4):591-602

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Longer-term Phentermine Use: Key Results

Efficacy

- Longer duration of phentermine use associated with clinically significant greater weight loss up to 2 years
- Discontinuation consistently resulted in weight regain
- Early responders (3% weight loss by 3 mo) more likely to reach clinically significant weight loss by 6 months and generally had more durable weight loss in all groups.

Safety

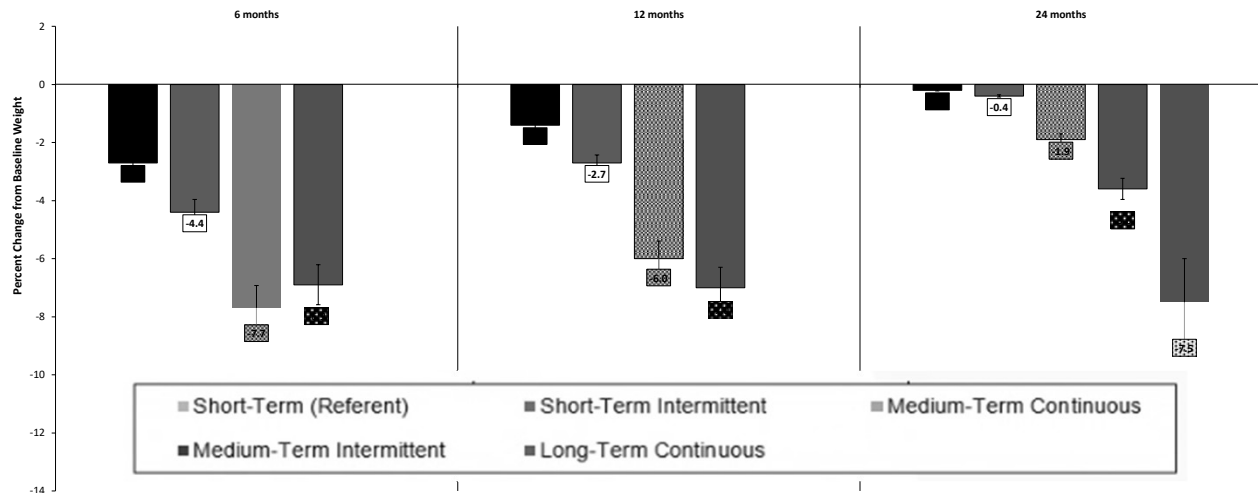
- Slight increase in average HR that normalized with drug discontinuation
- No blood pressure difference in groups at 6 mo; lower blood pressure noted in comparison groups at 12 and 24 mo.
- No significant difference in risk of incident CVD or death between groups related to duration of phentermine treatment (3-year follow-up)

Lewis KH, et al. *Obesity (Silver Spring)*. 2019;27(4):591-602

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Estimated Percent Weight Loss with Long-term Phentermine

Lewis KH, et al. *Obesity (Silver Spring)*. 2019;27(4):591-602



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Medications FDA Indicated for Longterm Use

Drug Name	Indication	Mechanism of Action	Route
Phentermine/topiramate ER	Age 12 years and up	Sympathomimetic, anorectic, reduces appetite	Oral
Orlistat	Age 12 years and up (Rx) Age 18 years and up (OTC)	GI lipase inhibitor to decrease fat absorption	Oral
Naltrexone/bupropion	Age 18 years and up	Reduces appetite (NDRI) & cravings (opioid antagonist)	Oral
Liraglutide	Age 12 years and up, with or without T2DM	GLP-1 receptor agonist, reduces appetite & food intake	Injection (daily)
Semaglutide	Age 12 years and up, with or without T2DM; CVD	GLP-1 receptor agonist, reduces appetite & food intake	Injection (weekly)
Tirzepatide	Age 18 up with or without T2DM; Sleep Apnea	GLP-1/GIP receptor agonist, reduces appetite & food intake	Injection (weekly)
Setmelanotide	Age 6 years and up with monogenic or syndromic obesity due to POMC, PCSK1, or LEPR variants	Melanocortin 4 receptor agonist, reduces appetite	Injection (daily)
Nonsystemic Oral Hydrogel	Age 18 years and up	Cellulose/citric acid hydrogel, promotes fullness in stomach (device)	Oral

Rx, prescription; OTC, over-the-counter; NDRI, norepinephrine-dopamine reuptake inhibitor; T2DM, type 2 diabetes mellitus; GLP-1, glucagon-like peptide 1.

1. Maurer Y, et al. *Cleve Clin J Med*. 2021;88(8):440-448. 2. Therapeutic Research Center. Accessed July 25, 2023. <https://prescriber.therapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-1057> 3. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023.

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Phentermine/topiramate ER

Adult dosing	<ul style="list-style-type: none"> • Initiate at 3.75 mg/23 mg x 2 weeks → Increase to 7.5 mg/46 mg x 12 wks • Escalate to 11.25 mg/69 mg x 2 weeks → Increase to 15 mg/92 mg
Efficacy	<ul style="list-style-type: none"> • 10% mean weight loss with treatment vs 2% placebo • Improved cardiometabolic markers • Reduced progression to T2DM
Contraindications/ precautions/warnings	<ul style="list-style-type: none"> • Monitor for reduced sweating/increased body temp • Pregnancy test (baseline & monthly) due to birth defect (cleft palate) risk • Worsening depression/suicidal thoughts • Increased BP and HR • Do not use: pregnancy, glaucoma, hyperthyroid
Side effects	<ul style="list-style-type: none"> • Paraesthesia, dizziness, dysgeusia, insomnia, constipation, dry mouth • 1/14 discontinuation rate
Clinical considerations	<ul style="list-style-type: none"> • Discontinue gradually to avoid increased seizure risk • Monitor kidney function • Reduced efficacy of OCP
Cost	<ul style="list-style-type: none"> • \$200/month for brand name; \$100 through manufacturer program

BP, blood pressure; HR, heart rate.

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescribertherapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-1057> 2. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023. 3. Qsymia Prescribing Information. Vivus LLC. 4. Bragg R, et al. *J Am Assoc Nurse Pract* 2016;28:107-15. 5. Kahan S. *Am J Manag Care*. 2016;22:S186-S196

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Orlistat

Adult dosing	<ul style="list-style-type: none"> • 120 mg TID within 1 hour of fat-containing meal
Efficacy	<ul style="list-style-type: none"> • Mean weight loss of 3.9%-10.2% at year 1 in 17 RCTs (120 mg TID) • Decreased BP, TC, LDL-C, fasting glucose at 1 year • Slows risk of progression to T2DM
Contraindications/ precautions/warnings	<ul style="list-style-type: none"> • Contraindicated for those with chronic malabsorption syndrome or cholestasis • Do not use in pregnancy, or when breastfeeding • Drug interactions
Side effects	<ul style="list-style-type: none"> • Oily spotting, flatus with discharge, fecal urgency, fatty/oily stool, oily evacuation, increased defecation, fecal incontinence • 1/26 discontinuation rate
Clinical considerations	<ul style="list-style-type: none"> • May interfere w/absorption of fat-soluble vitamins/medications/OCPs, especially if diarrhea • Need vitamins A/D/E/K/beta-carotene >2 hours separated from medication and levothyroxine 4 hours from medication
Cost	<ul style="list-style-type: none"> • \$600/month RX; \$40/month OTC (different dosing)

BP, blood pressure; OTC, over the counter; OCP, oral contraceptive pill; TC, total cholesterol; TID, three times a day.

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescribertherapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-10572> 2. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023. 3. Bragg R, et al. *J Am Assoc Nurse Pract* 2016;28:107-15. 4. Kahan S. *Am J Manag Care*. 2016;22:S186-S196. 5. Xenical Prescribing Information. Roche Pharmaceuticals.

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Naltrexone/bupropion

Adult dosing	<ul style="list-style-type: none"> • Initiate 8 mg/90 mg x 1 week • Weekly escalation to target dose of 32 mg/360 mg (2 tablets BID)
Efficacy	<ul style="list-style-type: none"> • Mean weight loss of 8.2% • Improved cardiometabolic parameters • Reduced cravings • Decreased HbA1c in patients with T2DM
Contraindications/precautions/warnings	<ul style="list-style-type: none"> • Contraindications: uncontrolled hypertension, seizure disorders, anorexia or bulimia, opioid use, monoamine oxidase inhibitors • Do not use in pregnancy
Side effects	<ul style="list-style-type: none"> • Nausea, constipation, headache, vomiting, dizziness, insomnia, dry mouth, diarrhea • 1/9 discontinuation rate
Clinical considerations	<ul style="list-style-type: none"> • Monitor for increased suicidal ideation • Monitor BP and HR • Avoid taking with high-fat meal to minimize seizure risk. • Consider concomitant psychiatric treatments
Cost	<ul style="list-style-type: none"> • \$500/month at full dose (2 tabs BID); \$100 through manufacturer program

NDRI, norepinephrine-dopamine reuptake inhibitor; CYP, cytochrome p450 inhibitors, BID, twice daily.

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescriber.therapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-10572> 2. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023. 3. Bragg R, et al. *J Am Assoc Nurse Pract* 2016;28:107-15. 4. Kahan S. *Am J Manag Care*. 2016;22:S186-S196. 5. Contrave Prescribing Information. Currax Pharmaceuticals LLC.

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Liraglutide

Adult dosing	<ul style="list-style-type: none"> • Weekly titration by 0.6 mg over 5 weeks to target dose of 3.0 mg
Efficacy	<ul style="list-style-type: none"> • Mean weight loss 9% at 1 year • Reduced progression to T2DM in patients with prediabetes • Reduced risk of weight regain at 1 year
Contraindications/precautions/warnings	<ul style="list-style-type: none"> • Contraindication: personal or family history of medullary thyroid carcinoma or multiple endocrine neoplasia syndrome type 2 • Do not use in pregnancy or when breastfeeding
Side effects	<ul style="list-style-type: none"> • Nausea, diarrhea, constipation, vomiting, injection site reactions, headache, hypoglycemia, dyspepsia, fatigue, dizziness, abdominal pain, increased lipase, upper abdominal pain, pyrexia, gastroenteritis • 1/18 discontinuation rate
Clinical considerations	<ul style="list-style-type: none"> • Monitor for signs and symptoms of pancreatitis, cholelithiasis • Discontinue DPP4 (gliptin) • May increase HR and SI • Must stay hydrated to avoid AKI • May slow absorption of other medications
Cost	<ul style="list-style-type: none"> • \$ 800/mo

T2DM, type 2 diabetes mellitus; MTC, medullary thyroid cancer; MEN2, multiple endocrine neoplasia type 2; AKI, acute kidney injury.

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescriber.therapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-10572> 2. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023. 3. Bragg R, et al. *J Am Assoc Nurse Pract* 2016;28:107-15. 4. Kahan S. *Am J Manag Care*. 2016;22:S186-S196. 5. Saxenda Prescribing Information. Novo Nordisk.

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Semaglutide

Adult dosing	<ul style="list-style-type: none"> • Initiate 0.25 mg weekly for 4 weeks • Increase dose in 4-week intervals to 2.4 mg
Efficacy	<ul style="list-style-type: none"> • Mean weight loss 10-16% at 68 weeks • Reduced HbA1c • Reduced risk of major adverse CV events by 20% (FDA indication)
Contraindications/precautions/warnings	<ul style="list-style-type: none"> • Contraindication: personal or family history of medullary thyroid carcinoma or multiple endocrine neoplasia syndrome type 2 • Do not use in pregnancy • Pulmonary aspiration during anesthesia or deep sedation
Side effects	<ul style="list-style-type: none"> • Nausea, diarrhea, vomiting, constipation, abdominal pain, headache, dyspepsia, fatigue, dizziness, abdominal distension, eructation, hypoglycemia (in those with T2DM), flatulence, gastroenteritis, gastroesophageal reflux disease, nasopharyngitis • 1/28 discontinuation rate
Clinical considerations	<ul style="list-style-type: none"> • Monitor for signs and symptoms of pancreatitis, cholelithiasis • May increase HR and SI • Must stay hydrated to avoid AKI • May slow absorption of other medications
Cost	• \$1300/month

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescribertherapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-105722>. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023. 3. Wegovy Prescribing Information. Novo Nordisk. 4. Company Announcement. Aug 8, 2023. Accessed 8/9/23. <https://www.novonordisk.com/news-and-media/news-and-materials/news-details.html?id=166301>

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Tirzepatide

Adult dosing	<ul style="list-style-type: none"> • Initiate at 2.5 mg weekly for 4 weeks • Increase dose in 4-week intervals until to 15 mg
Efficacy	<ul style="list-style-type: none"> • Mean weight loss 12-20% at 72 weeks • Obstructive Sleep Apnea 50-58% reduction in AHI (FDA indication) • Reduced HbA1c
Contraindications/precautions/warnings	<ul style="list-style-type: none"> • Contraindication: personal or family history of medullary thyroid carcinoma or multiple endocrine neoplasia syndrome type 2 • Do not use in pregnancy • Pulmonary aspiration during anesthesia or deep sedation
Side effects	<ul style="list-style-type: none"> • Nausea, diarrhea, vomiting, constipation, abdominal pain, headache, dyspepsia, fatigue, dizziness, abdominal distension, eructation, hypoglycemia (in those with T2DM), flatulence, gastroenteritis, gastroesophageal reflux disease, nasopharyngitis • 1/28 discontinuation rate
Clinical considerations	<ul style="list-style-type: none"> • Monitor for signs and symptoms of pancreatitis, cholelithiasis • May increase HR and SI • Must stay hydrated to avoid AKI • May slow absorption of other medications (thyroid and OCP)
Cost	• \$1300/month

1. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2024. 2. Tirzepatide Prescribing Information. Lilly4. Company Announcement. Accessed 2/10/25

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Setmelanotide

Adult dosing	<ul style="list-style-type: none"> • Age 6+: Initiate at 2 mg daily for 2 weeks • Titrate to 3 mg once daily
Efficacy	<ul style="list-style-type: none"> • 80% of patients with POMC or PCSK1 deficiency and 46% with LEPR deficiency had $\geq 10\%$ weight loss at 1 year (small trials)
Contraindications/ precautions/warnings	<ul style="list-style-type: none"> • Disturbance in sexual arousal • Increased depression and SI • Do not use in pregnancy or when breastfeeding
Side effects	<ul style="list-style-type: none"> • Injection site reaction, skin hyperpigmentation, nausea, headache, diarrhea, abdominal pain, back pain, fatigue, vomiting, depression, upper respiratory tract infection, spontaneous penile erection
Clinical considerations	<ul style="list-style-type: none"> • Only appropriate for those with obesity due to genetic testing confirmed deficiency of POMC, PCSK1, or LEPR (Bardet-Biedl syndrome)
Cost	<ul style="list-style-type: none"> • \$1000/vial

POMC, pro-opiomelanocortin; PCSK1, proprotein convertase subtilisin/kexin-type 1; LEPR, leptin receptor; GFR, glomerular filtration rate.

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescriber.therapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-10572> 2. Bays HE, et al. *Obesity Algorithm* eBook, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2023. 3. Imcivree Prescribing Information. Rhythm Pharmaceuticals, Inc.

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Nonsystemic Oral Hydrogel

Adult dosing	<ul style="list-style-type: none"> • 3 capsules 20-30 minutes before lunch and dinner with 16-20 oz. water
Efficacy	<ul style="list-style-type: none"> • Mean weight loss 6.4% at 24 weeks • 58.6% of patients were body weight responders
Contraindications/ precautions/warnings	<ul style="list-style-type: none"> • Contraindications: history of allergic reaction to cinnamic acid, sodium stearyl fumarate, gelatin, or titanium dioxide • Do not use during pregnancy
Side effects	<ul style="list-style-type: none"> • Abdominal distension, abdominal pain, constipation, diarrhea, flatulence, infrequent bowel movements, nasopharyngitis, headache, gastrointestinal disorders 1. Discontinuation
Clinical considerations	<ul style="list-style-type: none"> • Technically a device since it is not absorbed or metabolized
Cost	<ul style="list-style-type: none"> • \$99 per month

1. Therapeutic Research Center. Accessed July 25, 2023. <https://prescriber.therapeuticresearch.com/Content/Segments/PRL/2017/Jan/Weight-Loss-Products-10572> 2. Plenity®. Accessed July 25, 2023. <https://www.myplenity.com/>

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Anti-Obesity Medications Off Label

- Drug access/cost
- Optimize tolerance vs efficacy
- Add on therapy
- Other medical conditions

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Metformin



Adequate dose
Adequate time

- $\geq 5\%$ weight loss in about half of patients
- Greater efficacy in
 - Higher BMI
 - Greater severity of insulin resistance
- Start 500 mg; increase weekly or slower to target dose of 1000 mg twice daily (some studies dose 2550 mg/day IR)
- Extended-release formulation tolerated better; improved if taken with food
- Gastrointestinal side effects (diarrhea, bloating, and stomach pain) often resolve with time
- Co-occurring insulin resistance, prediabetes, PCOS, hx of GDM

Seifarth C, Schehler B, Schneider HJ. Effectiveness of metformin on weight loss in non-diabetic individuals with obesity. *Exp Clin Endocrinol Diabetes*. 2013 Jan;121(1):27-31.

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Topiramate



Greatest effect at higher doses and longer treatment duration

- $\geq 6\%$ expected weight loss
- Effective on cravings for carbohydrates and sweets; eliminating sodas
- Start 25 mg; increase to by 25 mg weekly to effective dose; 50-200mg
- Common side effects
 - paresthesia, changes in taste, hypoesthesia, concentration/memory impairment, somnolence, mood change
- Caution in women of childbearing age
 - Cleft palate birth defect risk
 - Reduced efficacy of OCP (dose dependent)
- Co-occurring seizure disorder or migraine headache

Kramer CK, et al. Efficacy and safety of topiramate on weight loss: a meta-analysis of randomized controlled trials. *Obes Rev.* 2011 May;12(5):e338-47.

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Bupropion

- 1.8% BMI loss at 8 wks; 3% weight loss at 6-12 mo
- Greater efficacy at higher doses
 - SR: 150-200 mg BID
 - XL: 300 mg daily
- Common Side effects
 - Increase HR or BP, seizure risk, anxiety, irritability, suicidality, headache, diaphoresis, insomnia
- Caution with other psychiatric medications
- Potential benefits to lifestyle intervention adherence
 - Reduced appetite
 - Improved mood and motivation
 - Increased energy
- Co-occurring depression, ADHD, nicotine dependence

McIntyre RS, et al. Mansur RB. Psychotropic Drug-Related Weight Gain and Its Treatment. *Am J Psychiatry.* 2024 Jan 1;181(1):26-38.

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Naltrexone

- RTC suggest no significant impact on body weight
- 50 mg tablet; ½ tab BID
- Common Side effects
 - Nausea, insomnia, mood change, suicidality, dizziness, fatigue
- Potential benefits to lifestyle intervention adherence
 - Reduced cravings, “food noise”
 - Reduced “reward” eating
- Co-occurring opioid/alcohol addiction, excess alcohol intake
- LDN
 - Used for anti-inflammatory properties – lost at higher doses needed to treat cravings

McIntyre RS, et al. Mansur RB. Psychotropic Drug-Related Weight Gain and Its Treatment. Am J Psychiatry. 2024 Jan 1;181(1):26-38.

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Lisdexamfetamine



FDA indicated for moderate to severe Binge Eating Disorder (BED)



No evidence for use in weight loss



Significant weight loss in in BED trials

5.2-6.25% weight loss (50-70 mg)
2.8-4.3 lbs in ADHD trials

1. McIntyre RS, et al. Mansur RB. Psychotropic Drug-Related Weight Gain and Its Treatment. Am J Psychiatry. 2024 Jan 1;181(1):26-38. 2. Vyvanse prescribing information

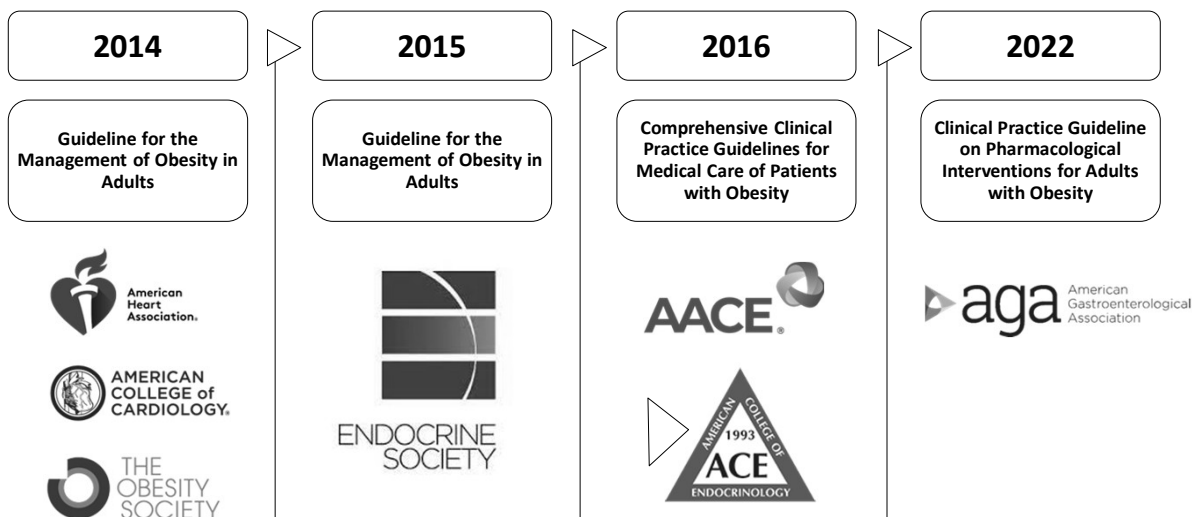
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Guidelines



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Clinical Guidelines



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Key Pharmacological Guidance

- Add AOM if inadequate response to lifestyle interventions alone
- Early weight loss helps predict sustained weight loss
 - 2.5% weight loss within 1 month for all patients
 - 5-10% within 6 months
- Medication selection is individualized based on treatment goals, weight-related complications, drug cautions and warnings

Medication should be used chronically; short-term treatment is not recommended

Cornier, M. *Am J Manag Care.* 2022;28(Suppl 15):S288-S296.

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Specific Medication Guidance



Prioritize semaglutide 2.4 mg due to magnitude of net benefit

- Most current AOM FDA indicated for long-term use have a balance of weight loss over harm that favor their use
- Orlistat – AGA suggests against use; endorsed in older guidelines
- Phentermine
 - AACE/ACE recommend against off-label AND short-term use
 - Endocrine Society and AGA provide conditional endorsement for off-label use

Avoid off-label use of drugs approved for other disease states for the sole purpose of weight loss

AGA, American Gastroenterological Association; AACE, American Association of Clinical Endocrinologists; ACE, American College of Endocrinology.
Cornier, M. *Am J Manag Care.* 2022;28(Suppl 15):S288-S296.

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Pediatric Guidelines: American Academy of Pediatrics

1998 & 2007

**Expert Committee
Recommendations**

2016

**Algorithm for the
Assessment and
Management of
Childhood Obesity**

2023

**Clinical Practice Guideline for the Evaluation and
Treatment of Children and Adolescents with Obesity**

- Immediate intensive treatment
- Intensive health behavior and lifestyle treatment (IHBLT)
- Insufficient response → intensify treatment with pharmacotherapy/surgery
- <12 years insufficient evidence for use of pharmacotherapy for sole indication of obesity
- Ages 8-11 offer pharmacotherapy for specific conditions according to indications, risks and benefits

Hampel SE, et al. *Pediatrics*. 2023;151(2).

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Pediatric Medication Guidance

Obesity Indication 12+ years

- Orlistat
 - Liraglutide 3.0
 - Phentermine/topiramate
 - Phentermine (16+ yrs)
 - Setmelanotide (6+ yrs)
- *semaglutide

Other Medical Condition Indication

- Metformin: 10+ T2DM
- Exenatide, dulaglutide, liraglutide 1.8: 10+ T2DM
- Topiramate: 2+ seizure, 12+ headache prevention
- Lisdexamfetamine: 6+ ADHD

ADHD, attention deficit hyperactivity disorder.
Hampel SE, et al. *Pediatrics*. 2023;151(2).

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Intensity of Weight Loss Intervention



Frequency of contact is important to outcomes

Intensity

- High intensity = ≥ 14 sessions in 6 month
- Moderate = 1-2 sessions /month
- Low intensity = less-than-monthly sessions

Comprehensive lifestyle intervention

- Multiple team members may provide contact
- Weight loss maintenance program for 2.5 years reduces weight regain

RDN intervention

- 5+ contacts
- 12 months in duration
- ongoing contact Q3 mo for as long as desired by client

1. Jensen, M. D., et al. 2013, *Circulation*, 129(25 Suppl 2), S102–S138. 2. Morgan-Bathke M, et al.. *J Acad Nutr Diet*. 2023 Mar;123(3):520-545.

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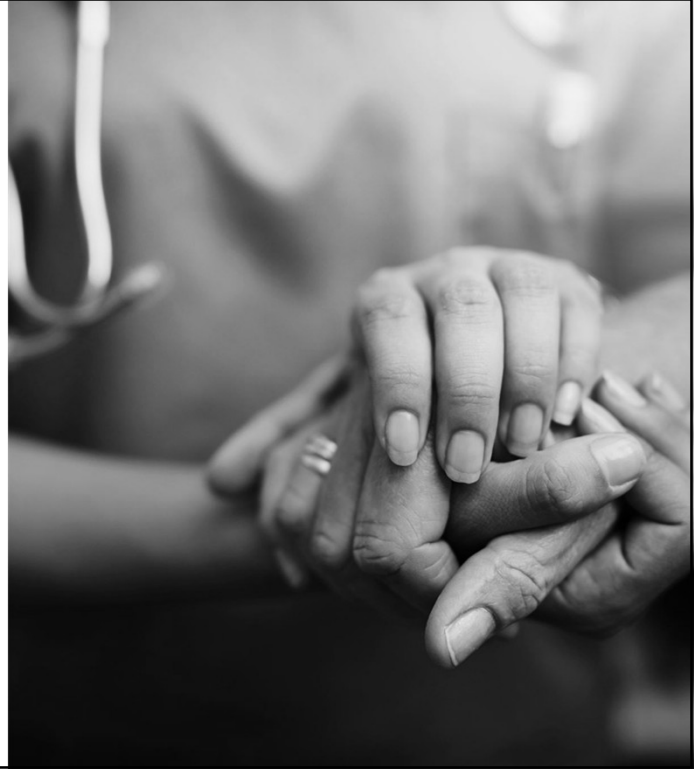
Supporting AOM use in patients



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Educate: Treatment Adherence

- Chronic nature of obesity treatment
- Pathophysiology of obesity
 - Obesity is not a failure of willpower
 - Obesity is not simply calories in and calories out
- Realistic expectations for all treatment pillars
 - Each treatment tool has a magnitude of benefit
 - Each pillar should complement the other increasing adherence to all



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Side Effects: Gastrointestinal

GLP-1's

- PROTEIN, PROTEIN, PROTEIN
- VOLUME
- Nausea/Reflux
 - Reduce foods that trigger reflux
 - OTC/Rx acid reducers
 - Avoid long-term antiemetic use
- Bloating, Belching, Flatulence
 - OTC simethicone
 - Reduce gas-producing foods
- Constipation
 - constipation vs. infrequent BM
 - HYDRATION,
 - Fiber, OTC osmotic laxatives, supplements-magnesium, aloe

- ✓ Reduce Dose
- ✓ Titrate Slower
- ✓ B-6



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Side Effects: Gastrointestinal

- ✓ Reduce Dose
- ✓ Titrate Slower
- ✓ B-6

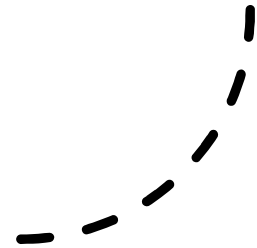
Naltrexone

- Reduce high-fat foods
- Take with a small amount of fat/protein

Metformin

- Take with food
- Consistent dosing
- Reduce highly processed foods

Gall Bladder Disease



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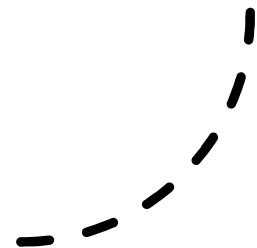
Side Effects: Insomnia

Sympathomimetic Amines

(phentermine etc.)

Naltrexone • Lisdexamphetamine

- Timing of dose
 - Naltrexone prior to 6p
 - Active at hardest time of day
- Reduce dose
- Sleep Hygiene



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Side Effects: Mood Change

PHQ-9, GAD-7, ED
screeners

Monitor with ALL AOM

Modest rise in anxiety or irritability at treatment initiation may resolve

- stimulants (sympathetic amines, lisdexamphetamine)
- bupropion

GLP-1

- mood change may be subtle, harder to identify, and occur over time

Naltrexone

- look for apathy

Disordered eating behaviors

- purging, excessive restriction, night eating, bingeing
- physiologic vs psychologic

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Side Effects: Fatigue

Nutritional Deficiency

- B12 – metformin

Inadequate Intake

- Protein
- Calories
- Activity level

GLP-1

- Pattern associated to injection
- Transient

Topiramate

- Drowsiness vs Fatigue

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Side Effects: Taste Changes

Topiramate

- Carbonated beverages
- Sweets
- Wide variability of other changes

GLP-1

- Crave healthy foods/vegetables
- Reduced desire/tolerance for alcohol
- “overconsumption” drug

Naltrexone

- Reduced desire for alcohol



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Educate: Social Impact

Family/Friend Interaction

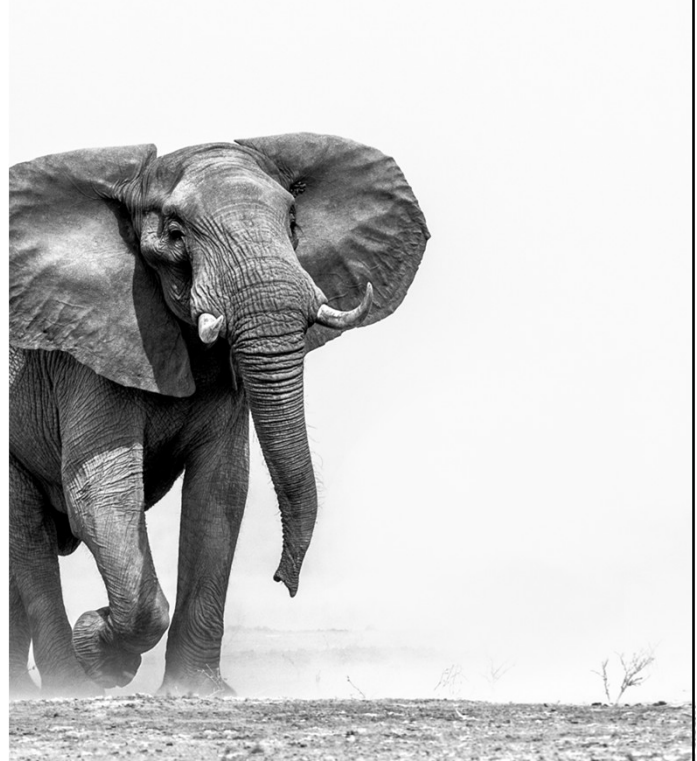
- You don't eat ____
- Realistic evaluation of normal

Navigating interactions

- Verbally
- Behaviorally

Practical Changes

- Restaurant ordering
- Shopping
- Planning for special occasions



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Summary

Treat obesity as a chronic disease that requires long-term interdisciplinary management

The use of anti-obesity medications adjunct to intensive lifestyle interventions may significantly improve weight loss and weight loss maintenance

The selection of medication should be determined collaboratively between the patient and the prescribing provider

Nutrition professionals play a critical role in supporting the appropriate, successful, and safe use of medications in the obesity treatment plan.

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Medication Reference Table

Drug Name	Brand Names (s)	Generic	Drug Name	Brand Names (s)	Generic
Phentermine/topiramate ER	Qsymia	No	Topiramate	Topamax, immediate release Trokendi XR; ER cap Qudexy XR; sprinkle cap	Yes Yes Yes
Orlistat	Xenical(Rx) Ali (OTC)	Yes	Bupropion	bupropion, immediate release Wellburtin SR (12 hr) Wellburtin XL (24 hr) Forfivo XL (450 mg only)	Yes Yes Yes No
Naltrexone/bupropion	Contrave	No	Naltrexone	Naltrexone 50 mg tab Bulk powder, compounding Vivitrol 95 mg monthly injection	Yes Yes No
Liraglutide	Saxenda (3mg), weight loss Victoza (1.8 mg) type 2 diabetes	No Yes	Lisdexamphetamine	Vyvanse	Yes
Semaglutide	Wegovy (2.4 mg), weight loss, CV risk reduction Ozempic (2mg), type 2 diabetes	No No	Phentermine	Phentermine 15, 30, 37.5mg cap Adipex-P 37.5 mg tab Lomaira 8 mg tab	Yes Yes No
Tirzepatide	Zepbound, weight loss, sleep apnea Mounjaro, type 2 diabetes	No Yes	Metformin	Tab: 500, 850, 1000 mg ER Tab 500, 750, 100 mg Sol: 500 mg/5ml	Yes
Setmelanotide	Imcivree	No			

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Questions

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