



WEIGHT LOSS MEDICATIONS



INDICATIONS



NOT MET WL GOALS

Weight loss goals typically comprise of at least 5% of total body weight in 3–6 months

FAIL LIFESTYLE MODS

Patient will have attempted weight loss via comprehensive lifestyle interventions

BMI GREATER/ \geq 30

BMI > 30 will make an individual a candidate. BMI is a screening tool; However, waist circumference should also be measured to confirm fat composition

BMI 27 - 29.9 + ONE/MORE COMORBIDITIES

Patients with a BMI under 30 are also candidates if they also suffer from one or more weight related complication or comorbidity

HAVE YOU HEARD OF...?

Tirzepatide

Semaglutide

Liraglutide

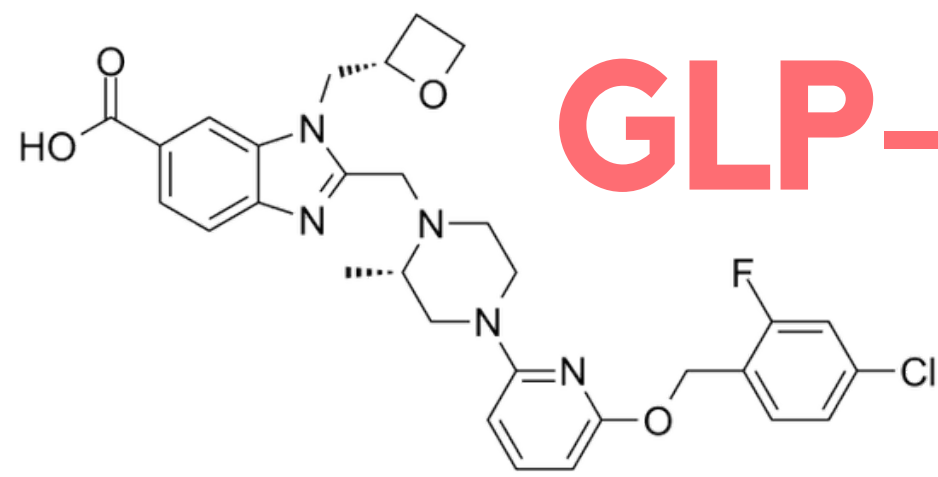
Phentermine-topiramate

Bupropion-naltrexone

Orlistat

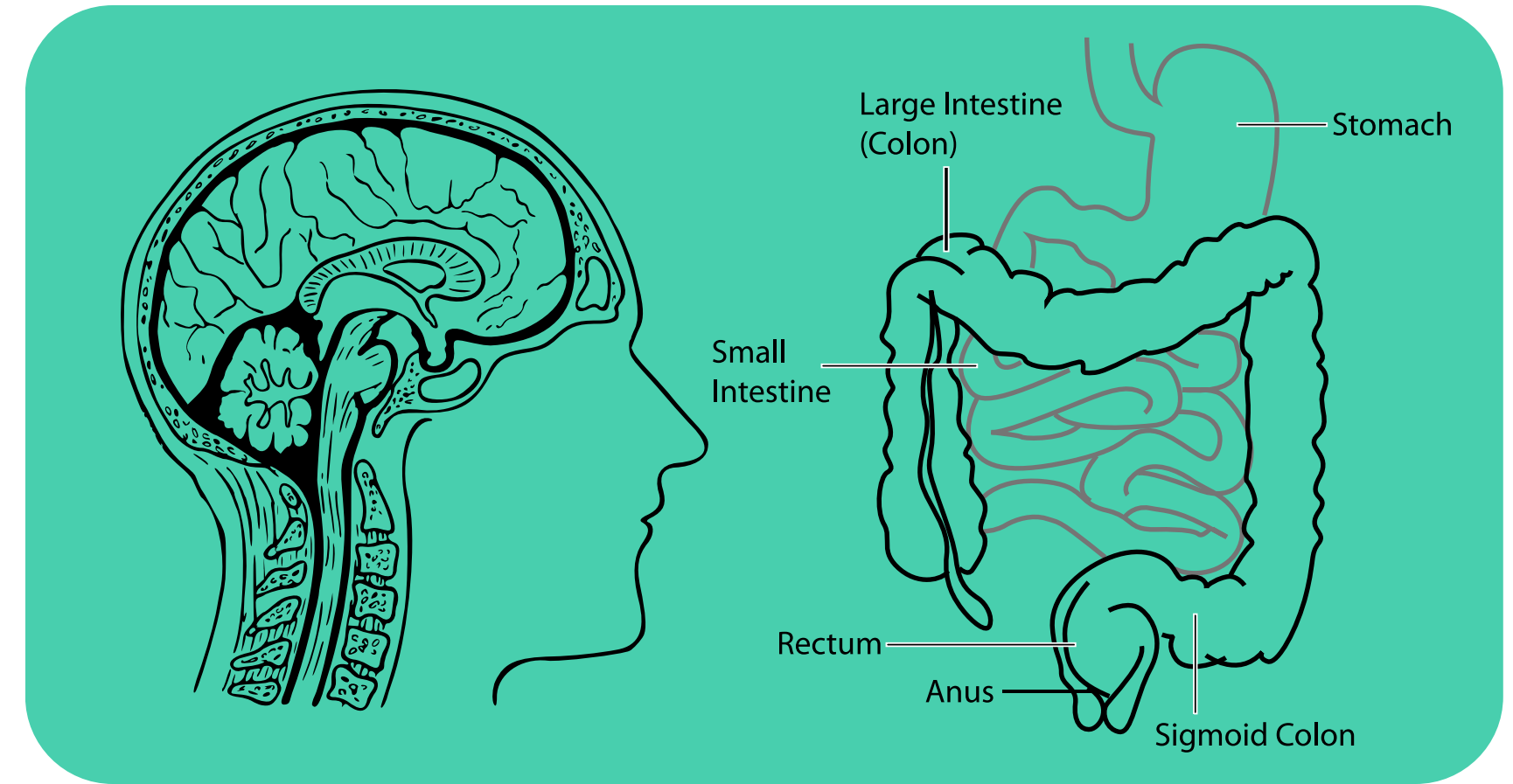
WHAT ABOUT...?





GLP-1 AND GIP

- Glucagon Like Peptide 1 (GLP-1) and Glucose-dependent Insulinotropic Peptide (GIP) stimulate glucose dependent insulin secretion
- Secreted by cells of the gut in response to meals
- GLP-1 also inhibits glucagon release and gastric emptying – Increasing satiety (feeling of fullness)
- GLP-1 acts on hypothalamus to directly inhibit appetite and increase satiety



Insulin

- The key that unlocks cells so that glucose can enter
- Without insulin or when the body does not respond to insulin --> Hyperglycemia

DRUGS THAT ACT ON GLP-1 AND GIP PATHWAYS

Tirzepatide

- Acts on GIP Receptors > GLP-1 Receptors
- Brand names – Mounjaro or Zepbound
- Weekly injection
- Approved FDA Diabetes 2022 wt loss 2023
- Major studies – 72 wks
- GoodRx \$1100 for 4 single use pens

Most significant weight loss
Effective treatments for DM
Semaglutide demonstrates improvement in risk of Cardiovascular adverse events (Stroke, Heart Attack)

Side Effects: n/v diarrhea, decreased appetite, constipation, abdominal discomfort, headache, Injection site reactions, GERD, gallbladder disease
Pancreatitis, possibly pancreatic cancer
Warning Label – Medullary Thyroid cancers
Suicidal thoughts/ideations – no firm evidence but the FDA is monitoring

Liraglutide

- Acts on GLP-1 Receptors
- Brand names – Victoza or Saxenda
- Once daily injection
- Major studies – 68 wks
- Approved DM 2010, wt loss 2014, children DM 2019
- GoodRx \$900 3 pens (1 pen/mo if on lowest dose)

Semaglutide

- Acts on GLP-1 Receptors
- Brand names – Ozempic or Rybelsus (oral) or Wegovy (wt loss only)
- Weekly injections
- Major studies – 68 wks
- Approved DM 2017, wt loss 2023, improve cv risk in obese patients 2024
- GoodRx \$1000 per pen (1 mo)



PHENTERMINE- TOPIRAMATE



Phentermine – Stimulant and appetite suppressant
Topiramate – anticonvulsant with weight loss side effect

Brand name – Qsymia

Once daily pill

GoodRx \$200 per bottle 30 pills

For patients who cannot take the preferred GLP-1 or GIP agents

Not approved for long term use – up to 12 weeks

Approved for use in US since 2012

Not approved in Europe regarding safety concerns

Avoid in patients with CV disease, alter dose with kidney or liver impairment, avoid in end stage kidney disease and severe liver disease

Associated with mood disorders– anxiety, depression, insomnia

Elevated Heart Rate

Abuse potential

Contraindicated with pregnancy, breastfeeding, hyperthyroidism, glaucoma, MAO inhibitors

BUPROPION- NALTREXONE

Bupropion - Reuptake inhibitor of Dopamine and Norepinephrine, which activate a specific part of the hypothalamus resulting in appetite suppression and increased energy output (antidepressant)

Naltrexone - opioid antagonist, increases the effects of Bupropion

Approved in 2014

Oral - start 1pill/day, work up to 4 pills per day

Black Box - Suicidal thoughts and behaviors

Contraindications - uncontrolled HTN, eating disorder, seizure disorder, chronic opioid use

Adverse Reactions - Nausea, constipation, headache

LOTS of Drug Interactions

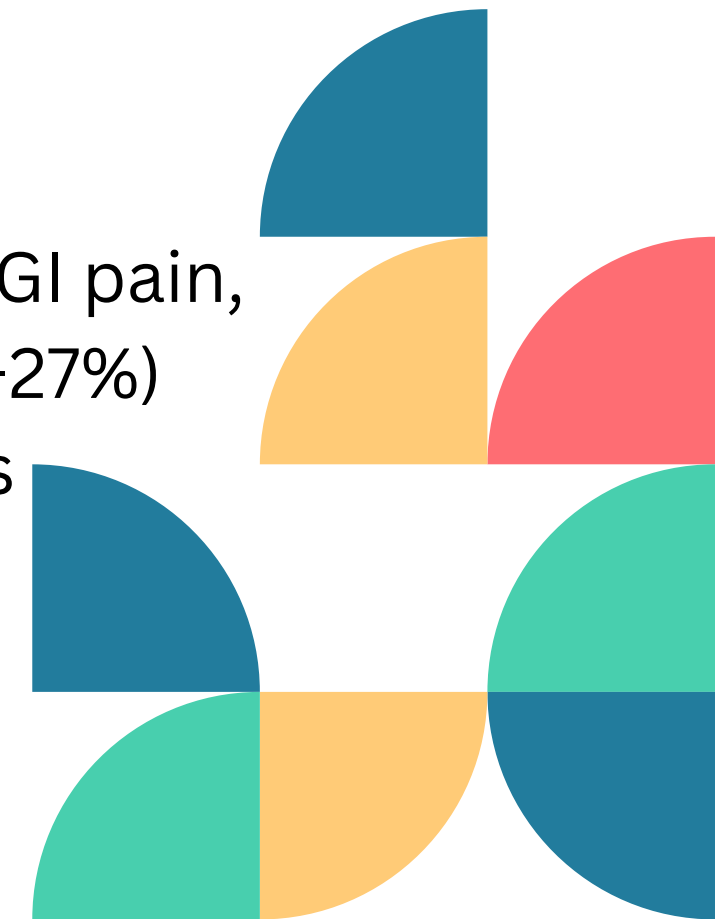
GoodRx \$500 for 120 Tablets



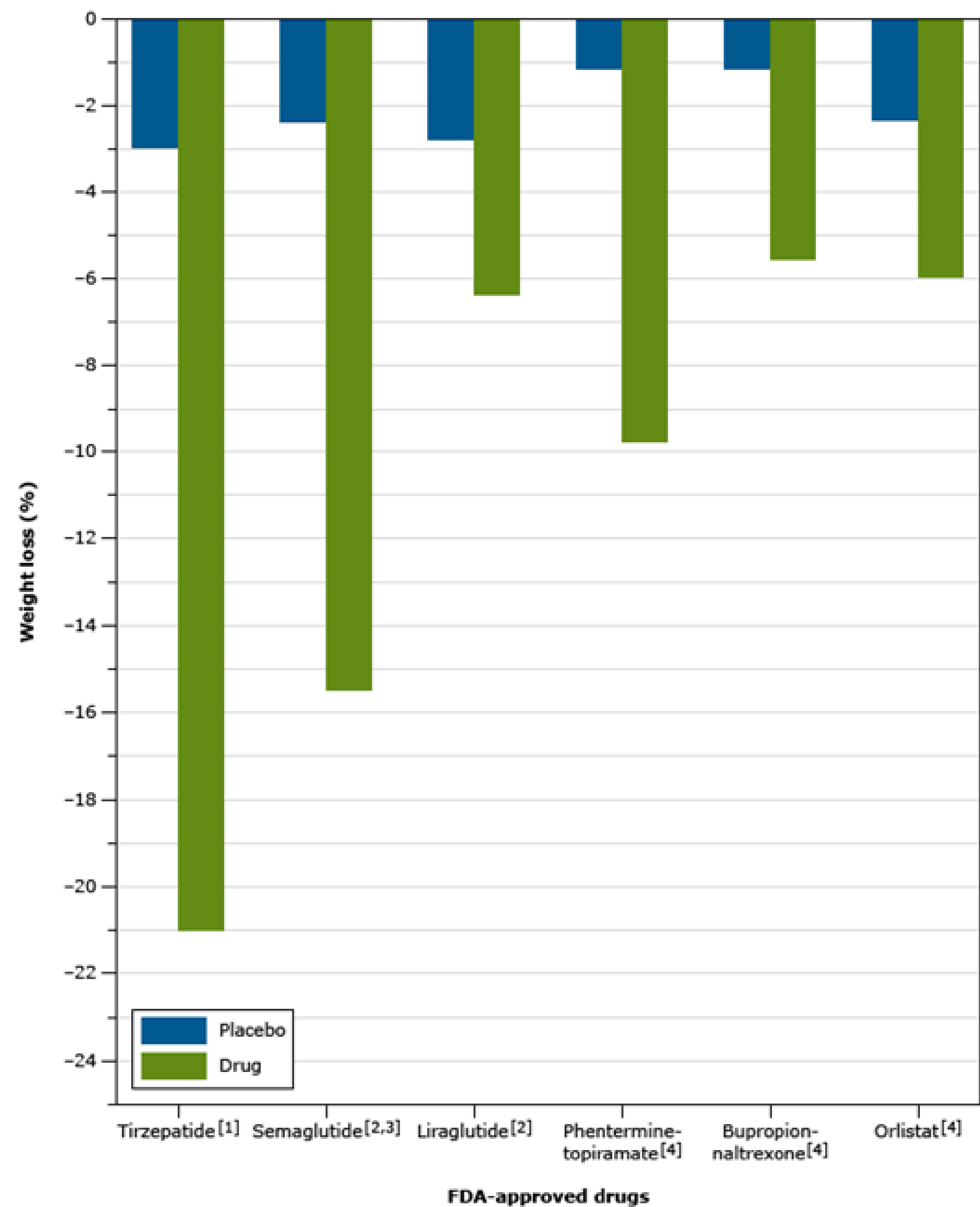
ORLISTAT



- Alli it's the only FDA-approved over-the-counter weight loss aid
- Xenical is a prescription strength medication
- Orlistat is a lipase inhibitor and works by binding to specific enzymes that break down fats.
- As a result, about 25 percent of the fat you consume is not absorbed and passes through the digestive system
- “For every 5lbs you lose through diet and exercise, alli can help you lose 2 to 3 more”
- Most people lost 5-10 pounds over 6 months
- Take one capsule with each meal that contains fat
- Approved for children as young as 8 years old
- Most common side effects - Vitamin Deficiency (ADE), GI pain, flatulence, frequent bowel movements, oily leakage (4-27%)
- Warnings - Hepatotoxicity, cholelithiasis, kidney stones
- Good Rx: Xenical \$300-750 for 90 capsules
- Target: Alli \$50 for 60 capsules



Weight loss outcomes with FDA-approved medications



Weight loss reflects results at 72 weeks (tirzepatide), 68 weeks (semaglutide, liraglutide), or 52 weeks (other medications).

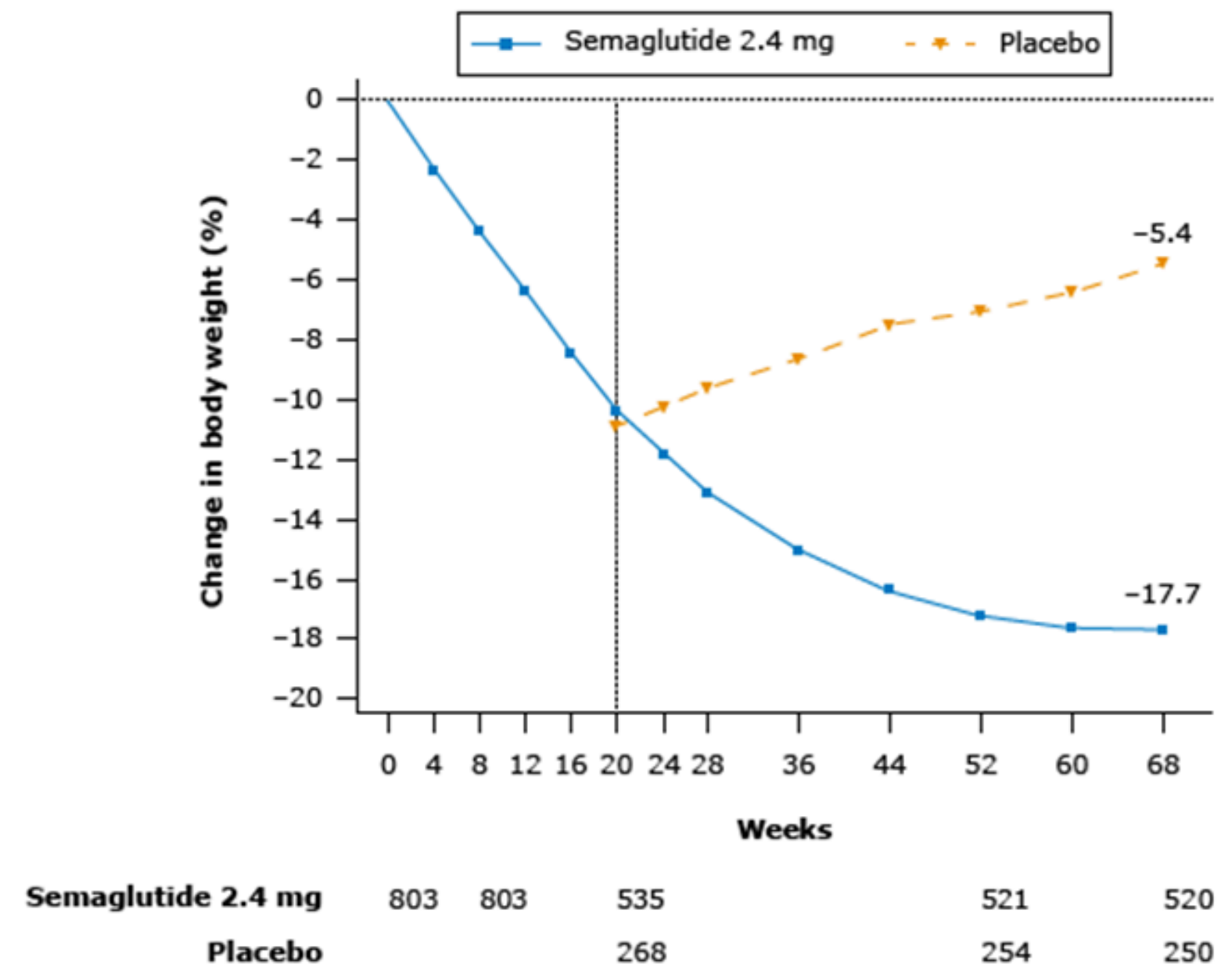
FDA: US Food and Drug Administration.

Data from:

1. Jastreboff AM, Aronne LJ, Ahmad NN, et al. Tirzepatide once weekly for the treatment of obesity. *N Engl J Med* 2022; 387:205.
2. Rubino DM, Greenway FL, Khalid U, et al. Effect of weekly subcutaneous semaglutide vs daily liraglutide on body weight in adults with overweight or obesity without diabetes: The STEP 8 randomized clinical trial. *JAMA* 2022; 327:138.
3. Wilding JPH, Batterham RL, Calanna S, et al. Once-weekly semaglutide in adults with overweight or obesity. *N Engl J Med* 2021; 384:989.
4. Khera R, Murad MH, Chandar AK, et al. Association of pharmacological treatments for obesity with weight loss and adverse events: A systematic review and meta-analysis. *JAMA* 2016; 315:2424.



Weight regain with discontinuation of semaglutide for weight management



Data from a 68-week randomized trial of 902 patients with obesity (or overweight plus at least 1 weight-related condition) and without diabetes. All participants received subcutaneous semaglutide during the 20-week prerandomization run-in period. At week 20, participants who tolerated semaglutide 2.4 mg once weekly (n = 803) were randomized to continued semaglutide or placebo. Dotted vertical line indicates time of randomization.

Journal of
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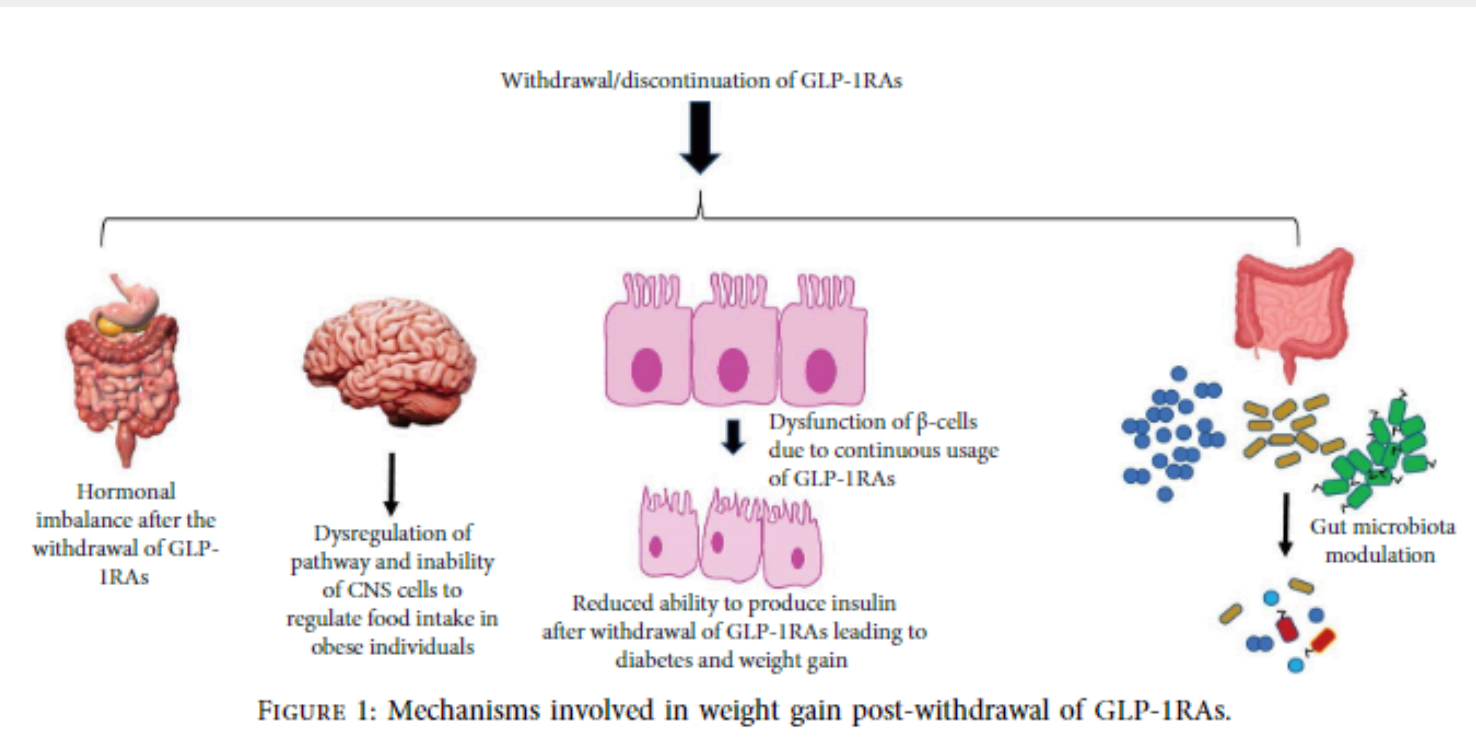
Review Article | [Open Access](#) | [CC BY](#)

A Comprehensive Review on Weight Gain following Discontinuation of Glucagon-Like Peptide-1 Receptor Agonists for Obesity

Ibrahim Abdullah bin Ahmed

First published: 10 May 2024 | <https://doi.org/10.1155/2024/8056440>

Academic Editor: Aron Weller



WEGOVY semaglutide injection 2.4 mg. US Food and Drug Administration (FDA) approved product information. Revised July 2023. US National Library of Medicine. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=ee06186f-2aa3-4990-a760-757579d8f77b> (Accessed on January 31, 2024).

UpToDate

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The number of Ozempic and Wegovy scams has grown by 183% so far this year

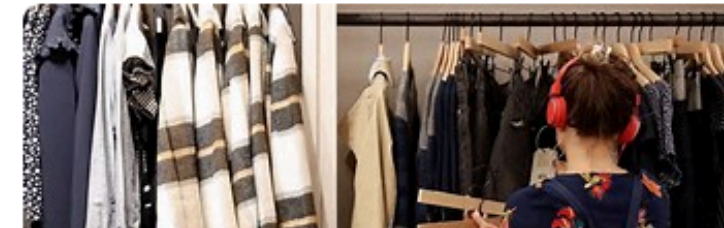
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Ozempic and Wegovy linked to lower risk of alcoholism

People with type 2 diabetes who take the drugs have a 30% lower risk of developing alcohol use disorder, a new study finds.



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Plastic surgeon warns of rise of 'Ozempic butt' – as weight loss patients come in to correct sagging backsides

WEIGHT LOSS SURGEON HAS WARNED OF THE RISE OF 'OZEMPIC BUTT' AS PATIENTS COME IN TO CORRECT SAGGING BACKSIDES



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