

LET'S TALK GLP1 &
OTHER
OBESITY TREATMENT OPTIONS

SUKI SINGH, MD, DABOM
(FAMILY MEDICINE & OBESITY MEDICINE)

HENRY FORD HEALTH

SYSTEM MEDICAL DIRECTOR

OBESITY MEDICINE AND WEIGHT MANAGEMENT CLINICS
(DETROIT, LIVONIA, (JACKSON), MACOMB, PLYMOUTH, WEST BLOOMFIELD, WYANDOTTE)

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Disclosures

- Advisor/ Consultant– Eli Lilly
- Advisor/Consultant – Novo Nordisk
- Advisor- American Academy of Medical Group Association (AMGA)

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Objectives

Pathophysiology behind the Disease of Obesity and obesity related comorbid conditions

Role of Obesity Management Medications- GLPI or GIP/GLPI class

Dietary Modification for patients on GLPIs or GIP/GLPI class

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Why Treat Obesity?



WE WOULD NEVER CALL HYPERTENSION MEDICATION AN "EASY WAY OUT." SO WHY DO WE SAY IT ABOUT GLP-1s?

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How to weigh yourself and get the most accurate result. I can't believe I have been doing it wrong all these years!



We must get the word out!

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Definition of Disease of Obesity

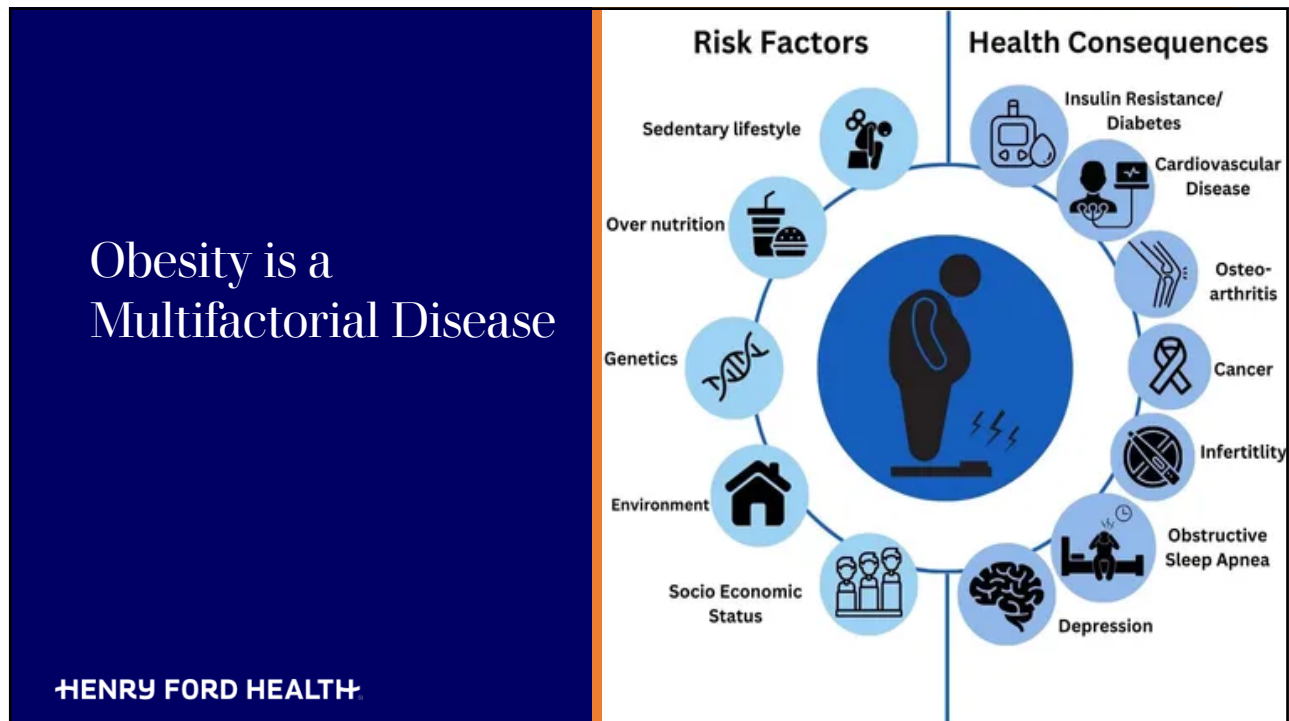


The Obesity Medicine Association (OMA) defines obesity as a chronic, relapsing, multi-factorial, neurobehavioral disease.



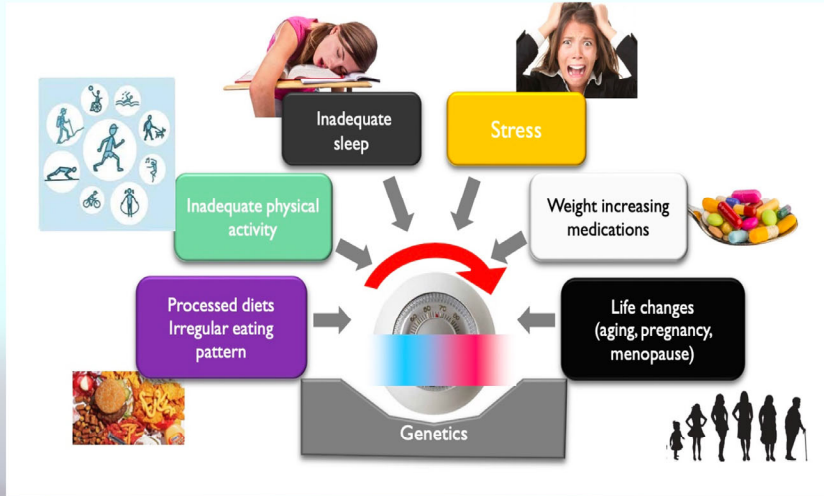
Characterized by an increase in body fat that leads to adipose tissue dysfunction, abnormal physical forces from excess fat mass, and adverse metabolic, biomechanical, and psychosocial health consequences

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What's causing Poor eating and lack of exercise



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Obesity Prevalence Is Increasing in the U.S., Across All States¹

Nearly

50%

of adults in the United States are predicted to be living with obesity (BMI ≥ 30 kg/m²) by 2030

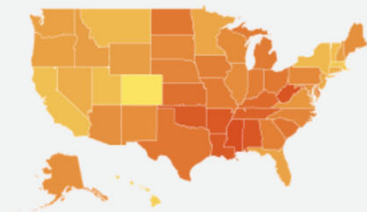
Study used BMI data from the Behavioral Risk Factor Surveillance System Survey (1993-1994 and 1999-2016), which was adjusted to align the data with objectively measured BMI distributions from the National Health and Nutrition Examination Survey. Trends in the prevalence of BMI categories were estimated according to subgroup in each state, and projections through 2030 were made.

Reference: 1. Ward ZJ, et al. *N Engl J Med.* 2019;381:2440-2450.

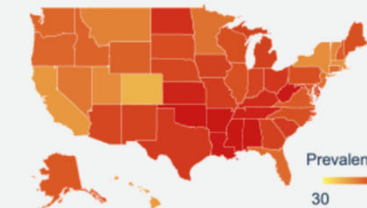
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Adult Obesity (BMI ≥ 30 kg/m²) Prevalence by State

2020



2030



Prevalence, %
30 60

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Where do we stand in Michigan?



National average of obesity is 40.3% in adults

23% U.S. adults with obesity have diabetes
Current Prevalence of Obesity – 35% of Michigan adults



45% of residents in Detroit have obesity (2022) (highest across MI)



By 2030, 50% of US population is expected to have disease of obesity



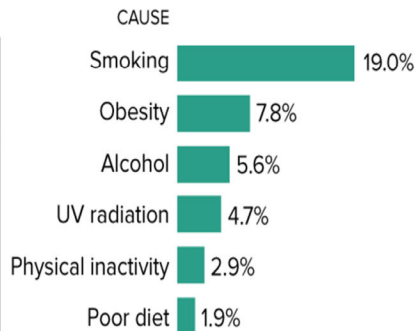
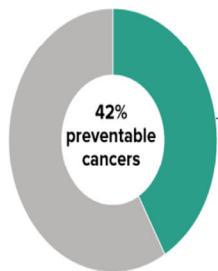
Projected to increase to 52% by 2030 in Michigan

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Obesity and Cancer

Preventable cancers

More than 40 percent of cancer cases can be prevented, the American Cancer Society finds in a new report. Here is a list of things people can change and their share of cancer cases:



Source: American Cancer Society

WHAT YOU NEED TO KNOW ABOUT OBESITY AND CANCER

After not smoking, **BEING AT A HEALTHY WEIGHT** is THE MOST IMPORTANT THING you can do to prevent cancer.

Overweight and obesity INCREASE RISK FOR¹

- ESOPHAGEAL CANCER
- GALLBLADDER CANCER
- KIDNEY CANCER
- COLORECTAL CANCER
- POST-MENOPAUSAL BREAST CANCER
- PANCREATIC CANCER
- OVARIAN CANCER
- ENDOMETRIAL CANCER

AICR ESTIMATES THAT **EXCESS BODY FAT** IS A CAUSE OF APPROXIMATELY **120,400** U.S. CANCER CASES EVERY YEAR.²

AND YET... 7 in 10 Americans are currently overweight or obese.

AND... Less than half of all Americans are even aware of the obesity-cancer link.³

PROTECT YOURSELF!

Move More **Eat Smart**

For tips on getting to, and staying at, a healthy weight, visit www.aicr.org

AMERICAN CANCER SOCIETY | 1120 21st St., North Chicago, IL 60064 | Phone: 800.227.2343 | www.aicr.org

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Motivational Interviewing Techniques: 5A's of Obesity Management

Ask

- Ask for permission to discuss body weight.
- Explore readiness for change.

Assess

- Assess BMI, waist circumference, and obesity stage.
- Explore drivers and complications of excess weight.

Advise

- Advise the patient about the health risks of obesity, the benefits of modest weight reduction (i.e., 5-10 percent), the need for long-term strategy, and treatment options.

Agree

- Agree on realistic weight reduction expectations, targets, behavioral changes, and specific details of the treatment plan.

**Arrange/
Assist**

- Assist in identifying and addressing barriers; provide resources; assist in finding and consulting with appropriate providers; arrange regular follow up.

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Edmonton Obesity Scoring System

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Obesity staging using EOSS












Obesity staging using recommended classification of BMI

Category	Body mass index
Underweight	< 18.5
Normal (healthy weight)	18.5–24.9
Overweight	25–29.9
Obesity class I	30–34.9
Obesity class II	35–39.9
Obesity class III	≥ 40

In people of South, Southeast or East Asian ethnicity metabolic risk is observed at lower BMI values.

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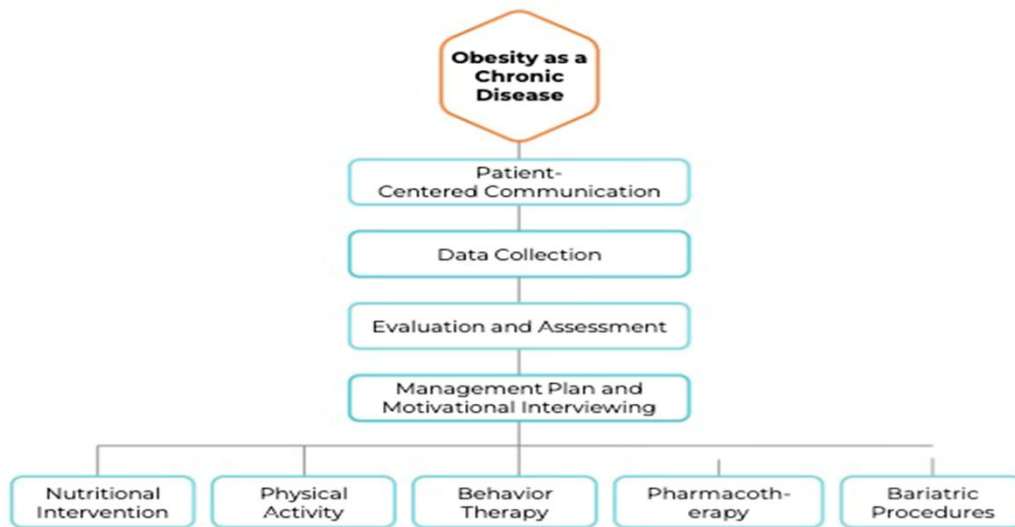
Preclinical ---> Clinical Obesity

	Preclinical obesity	Clinical obesity
Excess adiposity	 +  (BMI) (Waist circumference, etc)	 +  (BMI) (Waist circumference, etc)
Mechanisms and pathophysiology	Alterations of cells and tissue → Alterations of organ structure	Alterations of organ function → End-organ damage
Clinical manifestations	Minor or absent (substantially preserved organ function)	Signs and symptoms Limitations of daily activities Complications
Detection and diagnosis	Anthropometrics, medical history, review of organ systems, and further diagnostic assessment as needed	
	  	   

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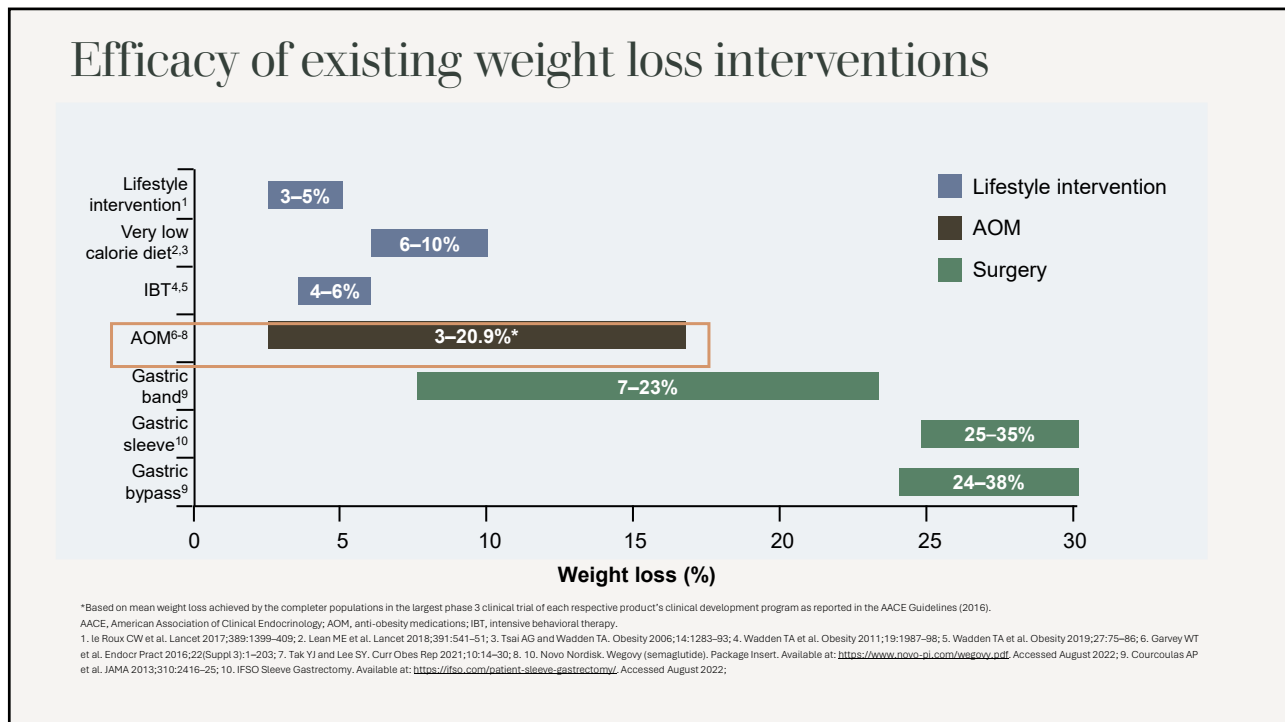
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The OMA Obesity Algorithm

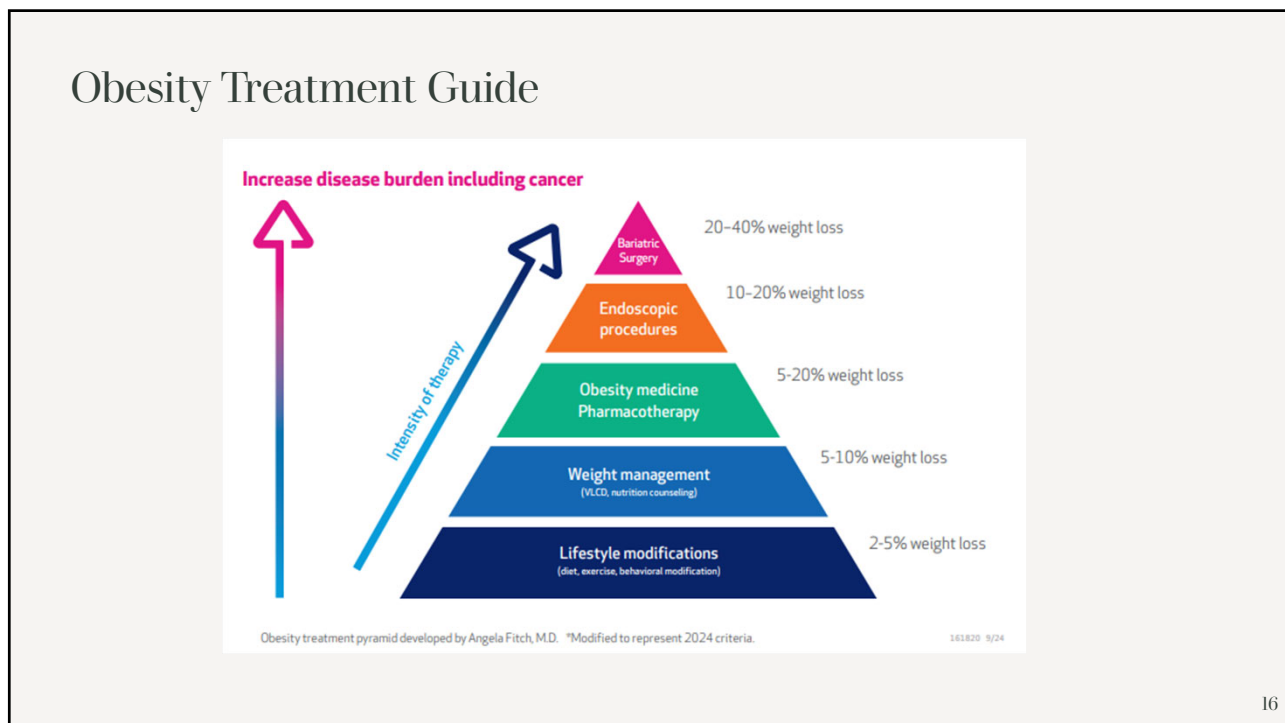


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Rationale – Why use Anti-Obesity Medications (AOM's) or Obesity Management Medications



AOM's help patients adhere to a reduced calorie diet more consistently in order to achieve more sufficient weight loss and health improvements when combined with increased physical activity



Third generation of AOM's- Metabolic benefits!!!

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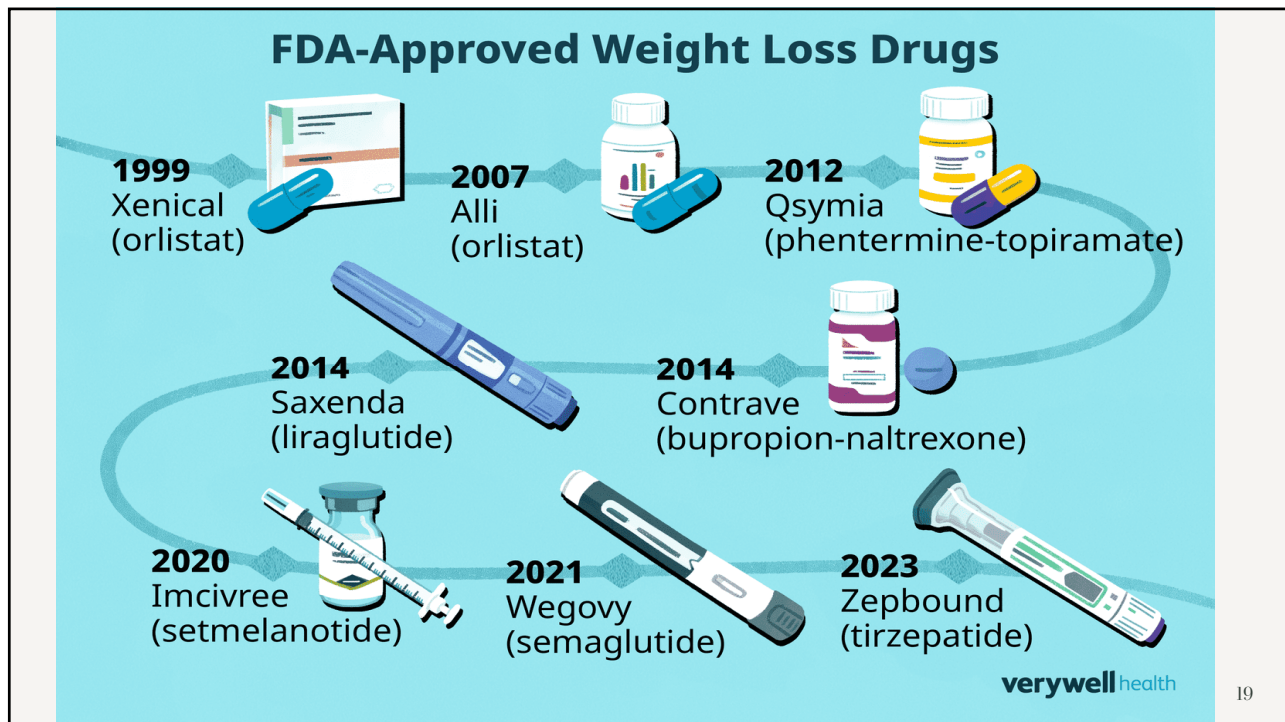
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Current FDA-approved Pharmacotherapy: Overview

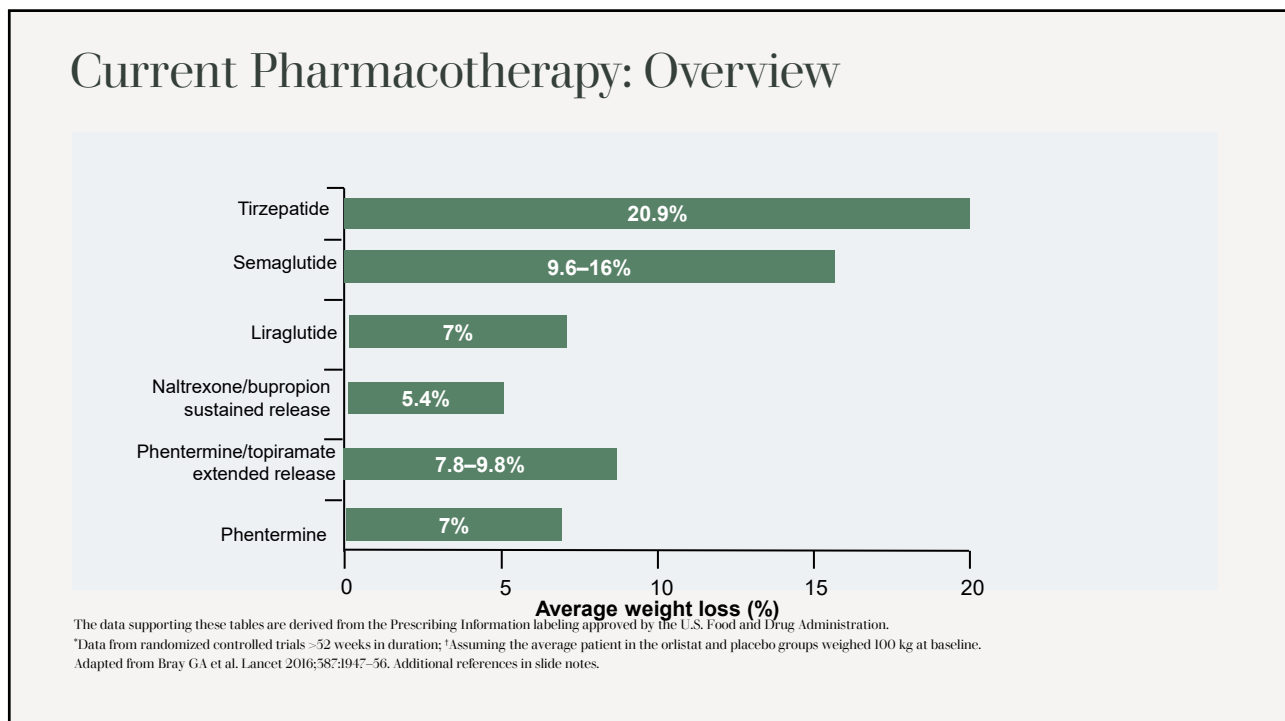
Name	Class	Effect
Phentermine mono-therapy* (Phentermine)	Sympathomimetic**	Reduce appetite
Orlistat	Pancreatic lipase inhibitor	Reduces fat absorption hence fewer inbound calories
Phentermine/topiramate ER (PHEN/TPM ER) (Qsymia)	Sympathomimetic anticonvulsant (GABA receptor modulation, carbonic anhydrase inhibition, glutamine antagonism)†	Reduce appetite
Naltrexone/bupropion SR (Contrave)	Opioid receptor antagonist; dopamine and norepinephrine reuptake inhibitor†	Reduce appetite
Liraglutide (Saxenda)	GLP-1 receptor agonist†	Reduce appetite
Semaglutide (Wegovy)	GLP-1 receptor agonist	Reduce appetite
Tirzepatide (Zepbound)	GIP/GLP-1 agonist	Reduce appetite

*Not approved for long-term use; †The exact mechanisms of action for weight management are not fully understood. Information from U.S. product labels, except where noted. The data supporting these tables are derived from the Prescribing Information labelling approved by the US Food and Drug Administration. ER, extended release; GABA, gamma-aminobutyric acid; GLP-1, glucagon-like peptide-1; PHEN, Phentermine; SR, sustained-release; TPM, topiramate. Adapted from Bray GA et al. Lancet 2016;387:1947–56. Additional references in slide notes.

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Indications for AOM's

Adjunct to healthy diet and exercise in patients with Obesity

- BMI > 30
- BMI > 27 with at least 1 weight related comorbidity
- Hypertension
- Dyslipidemia
- Type 2 Diabetes
- Chronic kidney disease
- PCOS?
- Metabolic syndrome/MASLD/NAFLD
- Sleep Apnea
- CVD
- Stroke etc

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Liraglutide

(Victoza and Saxenda)

- Class: GLP- 1 Agonis
- SCALE study: 56 weeks, double blinded trial, 3731 patients without type 2 diabetes
- Average % weight loss- 1 year: 7%
- Once a day injection
- Dose titration required
- Titrate dose weekly by 0.6 mg as tolerated by patient
 - 0.6 mg SC QD
 - 1.2 mg SC QD
 - 1.8 mg SC QD
 - 2.4 mg SC QD
 - 3.0 mg SC QD

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<p>Victoza Type 2 Diabetes</p> <p>Saxenda Chronic Weight Management</p>		<ul style="list-style-type: none"> • Liraglutide
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Semaglutide (Ozempic/Wegovy)

Class

- GLP 1- Agonist
- Ozempic- Approved for Type 2 Diabetes and Type 2 diabetes with chronic kidney disease

Step 1 Clinical Trial- Wegovy approved for Obesity Treatment

1961 adults with class 1 obesity or BMI 27 with **at least** one weight related disease

% weight loss- Average 14.9% weight loss over 68 weeks

Starting dose- Always 0.25 mg, titrate monthly- as tolerated by 0.25 mg increments monthly; maximum dose os 2.4 mg

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Semaglutide

Ozempic- FDA Approved for Type 2 Diabetes

Wegovy-

- Chronic weight management (June 2021)
- Cardiovascular risk reduction (**March 2024**)
- Metabolic dysfunction-associated steatohepatitis (MASH)
August 2025
 - **Moderate to advanced fibrosis (scarring) (non cirrhosis patients)**

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Common side effects

- Nausea
- Vomiting
- Diarrhea
- Constipation
- Headache
- Dyspepsia
- Increased heart rate

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Contraindications, Caution and Safety

Pregnancy and Breastfeeding	Personal or family history of medullary thyroid cancer or MEN2	Personal history of Pancreatitis
Acute gallbladder disease	Gastroparesis	Severe renal impairment can result in vomiting and dehydration
Use cautiously in patients with cholelithiasis	Suicidal ideation and behavior	Injection site reactions

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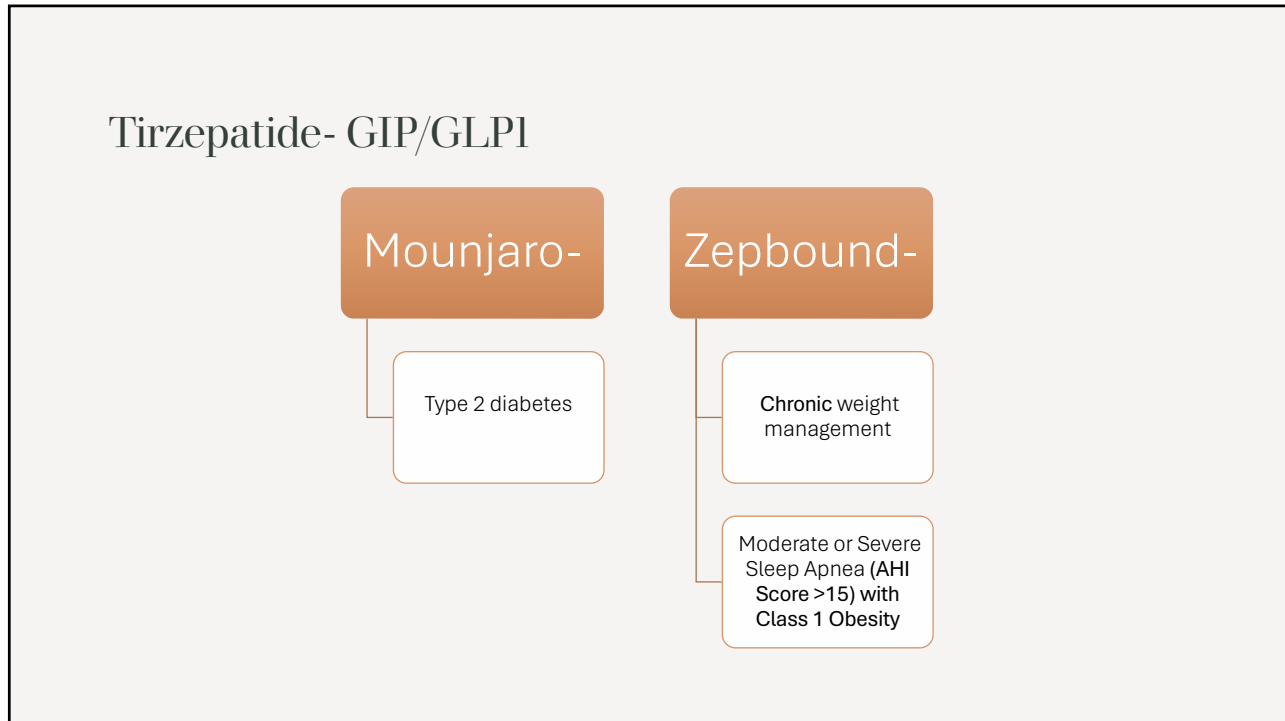
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Tirzepatide (Mounjaro/Zepbound)

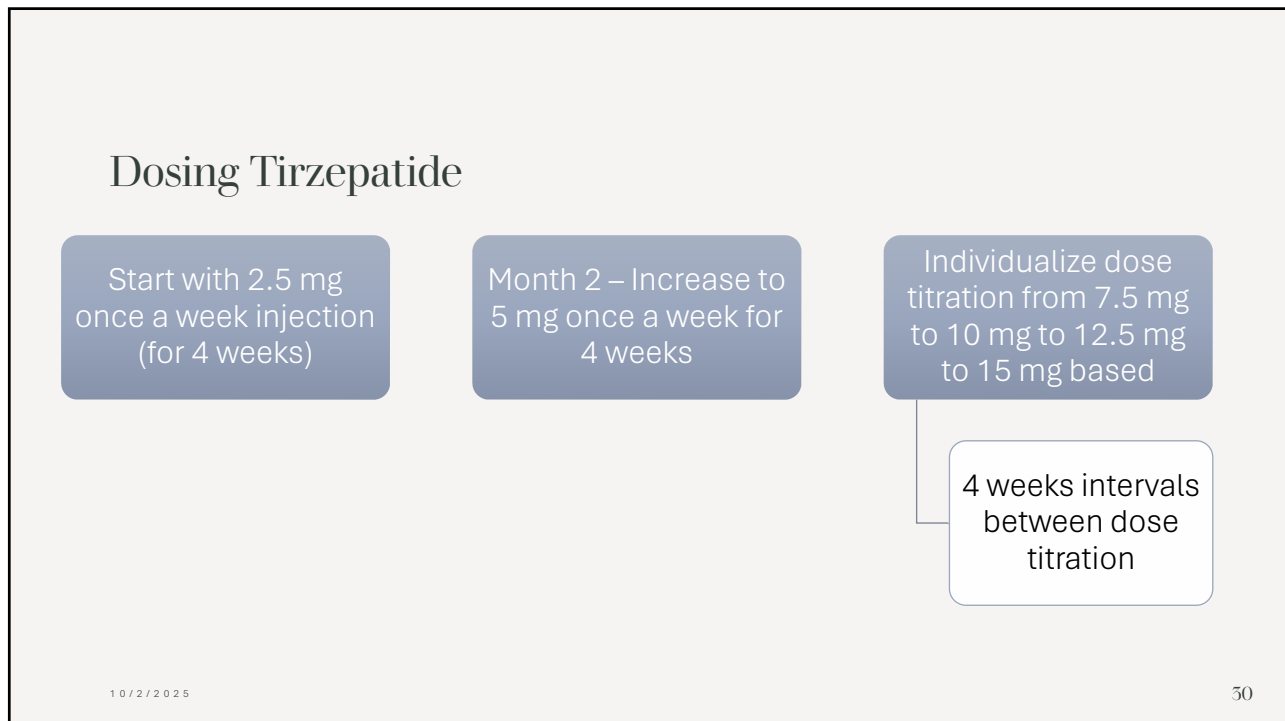
Class	Mechanism of action	Sarmount 1 - % weight loss- 20.9% compared to placebo over 72 weeks
<ul style="list-style-type: none"> • GLP1 (glucagon- like peptide-1) - GIP (glucose- dependent insulinotropic polypeptide) Agonist 	<ul style="list-style-type: none"> • Stimulates first and second phase insulin secretion (increasing insulin sensitivity) • Decreases glucagon levels in a glucose dependent manner • Slows down gastric emptying • Reduces fasting and postprandial glucose concentration • Creates a sense of satiety at lower levels of food intake 	

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Side effects




Gastrointestinal side effects- Nausea, vomiting diarrhea- Dietary modification is a MUST!!!




Acute kidney injury




Worsening chronic renal disease (Dehydration)



Acute gall bladder disease (cholecystitis 0.7%)



Injection site reaction



Unknown whether a previous reaction to another GLP1 will cause a similar reaction, use caution!

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Contraindications/Cautions

History of pancreatitis (Caution not a contraindicated)

Personal or family history of medullary thyroid cancers (MEN2 syndrome) (contraindication)

Has not been studied in cases with severe gastroparesis

Risk of thyroid C-cell tumors (Caution)

- Counsel patients for symptoms of thyroid tumors (mass in neck/ dysphagia, hoarseness)
- If concerned based on symptoms, check calcitonin level --> elevated --> thyroid ultrasound
- Nodule/mass on exam --> Thyroid ultrasound

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Addressing Side Effects



Nausea

Take the injection on Friday
Eat smaller/low fat meal the day before first injection
Avoid greasy foods



Constipation

Increase fluids and fiber
Use miralax daily



Fatigue

Encourage balanced nutrition and activity especially strength training
Reassure

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Sarmount 5 Study (2025)

Zepbound VS Wegovy
over 52 weeks

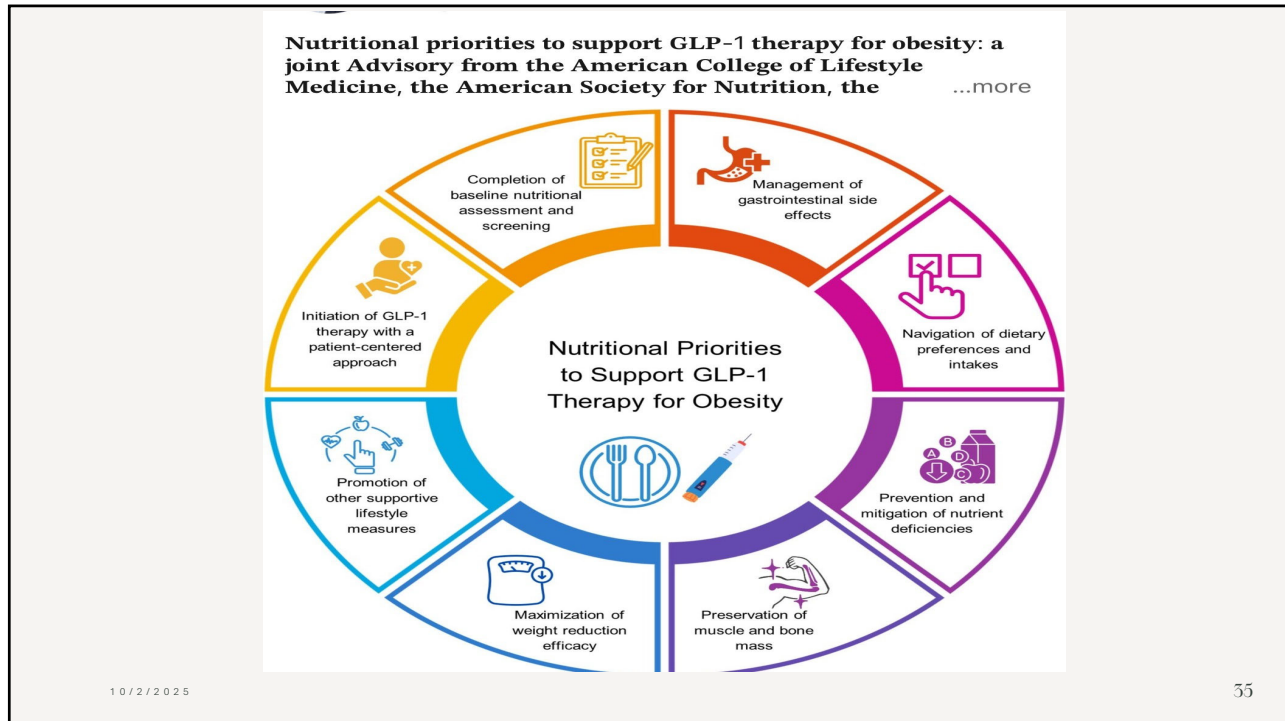
Randomized, Open
Label study

Zepbound (GIP/GLP1)
showed superior weight
loss of 20.7% compared
to Wegovy (13.7%)

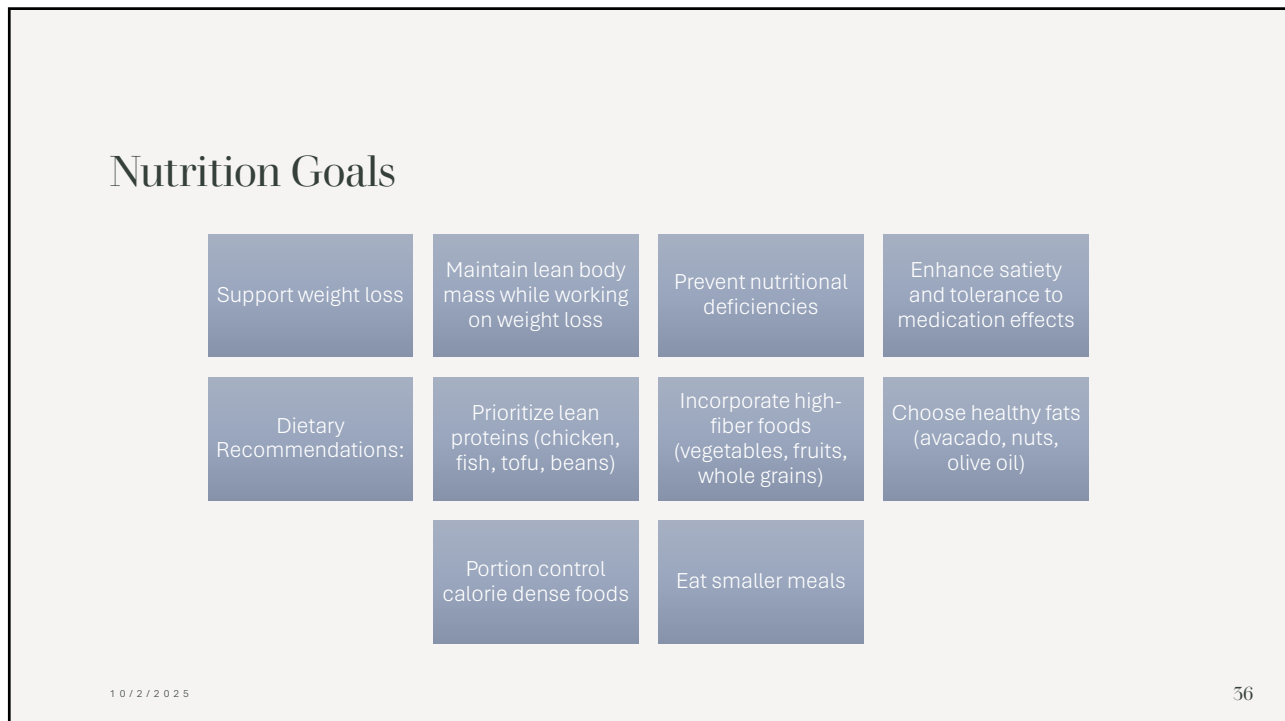
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In a Nutshell.

GLP-1 Therapy + Nutrition: Practical Guide

- 1. Protein First**
 - Aim for 1.0–1.2 g protein/kg/day to “— to preserve muscle.
 - Include protein in every meal/snack, eggs, fish, chicken, paneer, Greek yogurt, soy, pulses)
- 3. Nutrient Density Matters**
 - Choose minimally processed, whole foods over calorie-dense ultra processed ones.
 - Emphasize: veggie, whole grains, legumes, nuts, seeds, and healthy oils.
- 4. Micronutrient Vigilance**
 - Risk of shortfalls: iron, calcium, magnesium, vitamin D, B₂, folate
 - Encourage variety + consider supplements if labs or diet suggest deficiency, Patients with reduced intake
- 5. Hydration & GI Side Effect Management**
 - Sip water regularly: avoid carbonated (sugary) beverages.
 - For nausea: ginger tea, bland foods, smaller portions.
 - For constipation: fiber-rich foods, fluids, light activity
- 6. Bone Health**
 - Adequate calcium + vitamin D through diet or supplements
 - Encourage weight-bearing activity (walking, resistance training)
- 7. Lifestyle Beyond Food**
 - Exercise: at least 150 min/week plus 2 “resistance sessions
 - Sleep: 7–8 hours
 - Stress: mindfulness, yoga, or relaxation practices
 - Social support: group programs or dietitian visits + adherence
- 8. Plan for Maintenance**
 - Weight regain is common after stopping GLP-1

Bottom line: GLP-1s are powerful, but nutrition, exercise, and lifestyle are the “amplifiers” that protect muscle, bone.

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Hydration Goals

Aim	Avoid	Drink
64 oz of water daily	Soda/Juices/sugary drinks/alcohol	Water/fluids after eating a meal while on GLP1 <ul style="list-style-type: none"> • Helps decrease early satiety

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Phentermine (**Adipex/ Lomaira**)

- MAO: Sympathomimetic amine anorectic
 - Stimulates noradrenaline and dopamine release in the hypothalamus
- DEA Scheduled IV Controlled Substance
- Indications: Short-term adjunct to diet and exercise (12 weeks at 37.5 mg)
- Dosing:
 - 8 mg up to three times daily – Half hour before meals
 - 15 mg once daily on empty stomach before breakfast
 - 30 mg once daily on empty stomach before breakfast
 - 37.5 mg once daily on empty stomach before breakfast
 - Duration <12 weeks at 37.5 mg

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Phentermine- Topamax (**Qsymia**)

- MOA:
 - Central noradrenergic effects
- Phentermine: Immediate release sympathomimetic
 - decreases appetite
- Topiramate ER: delayed release GABAergic
 - increases satiety
- Once daily in the morning
 - Starting dose: 3.75/23 mg for 14 days
 - Usual dose: 7.5/46 mg
 - 11.25 mg/69 mg
 - Maximum dose: 15/92 mg
 - If <3% weight loss after 12 weeks on usual dose, discontinue medication or advance to maximum dose

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Bupropion/Naltrexone (Contrave)

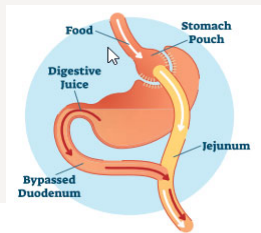
- Opiate antagonist (naltrexone) – mesolimbic dopamine circuit (reward system)
- Reuptake inhibitor of DA and NE (Bupropion) – hypothalamus (appetite regulatory center)
- Study: included– 4500 adults with obesity, treated for one year
- Multicenter, Double blinded, randomized, place-controlled, phase 3 trial
- % weight loss: 1 year 4.2% - 5.2%
- Duration of use – if patient has not lost at least 5% of their baseline weight at 12 weeks on maintenance dose, discontinue medication

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Types of Bariatric Surgery- current

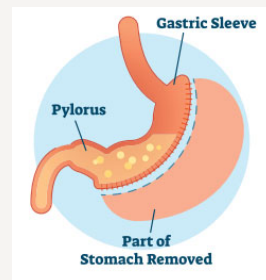
Roux-en-Y Gastric Bypass

- “Gold Standard” of weight-loss surgery and has been around the longest
- Laparoscopic surgery- Very small cuts in skin, using small tools and a camera
- 1-ounce stomach pouch after
- The small intestine is bypassed
- Lifelong multivitamins



Sleeve Gastrectomy

- Removes 80% of the stomach
- It does not involve a bypass of the intestines
- Laparoscopic surgery



Bariatric surgery is a safe surgery!

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GLPI or GIP/GLPI Medications

Safe for prebariatric and postbariatric surgery patients

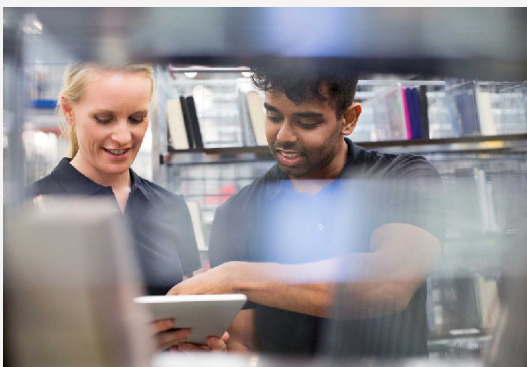
Nutritional recommendations are the same- small meals every few hours

Eat small meals

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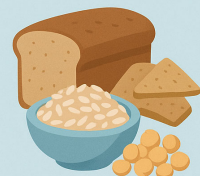
GLP-1 NUTRITION



PROTEIN



NON-STARCHY VEGETABLES



WHOLE GRAINS



HEALTHY FATS

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