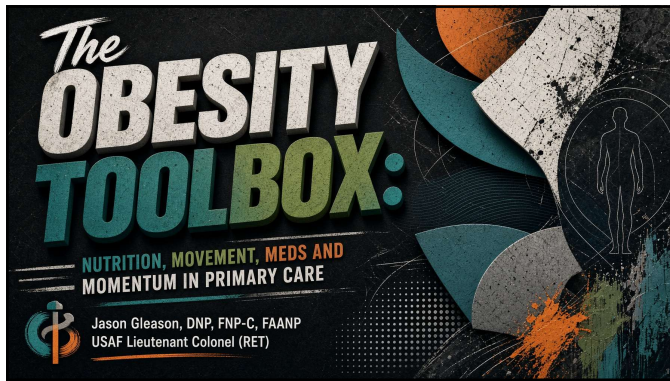
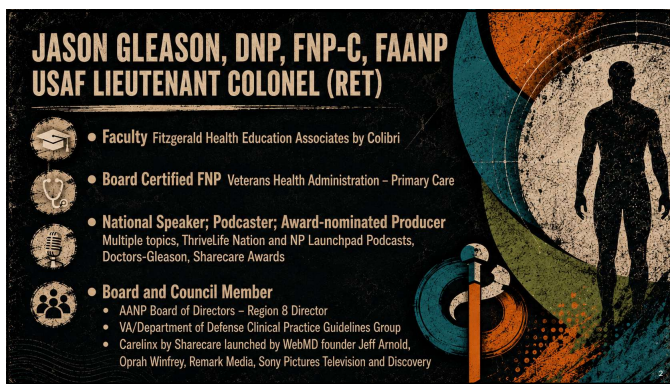




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disclosures

No real or potential conflict of interest to disclose

No off-label, experimental or investigational use of drugs or devices will be presented unless noted

All relevant financial relationships have been mitigated

References listed throughout the program are listed at the back of the presentation and handout

Image sources are listed at the back of the presentation for any images used in the presentation

4



SCAN TO ACCESS CLINICAL TOOLS

1. Take out your cell phone.

2. Scan the QR codes shown during this presentation.

3. Gain instant access to additional clinical information, interactive tools, and resources.

Recommended for optimal learning and reference.

5



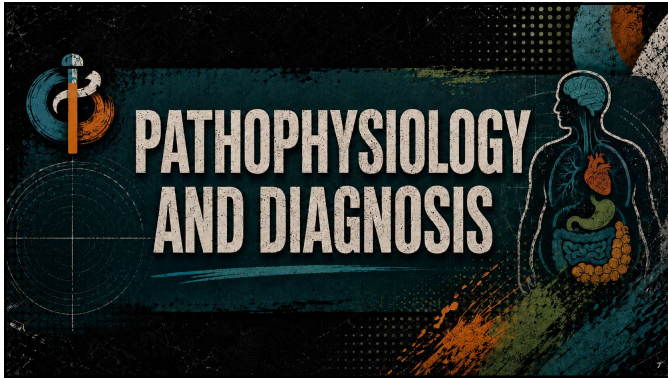
Pathophysiology and diagnosis

Nutrition

Movement

Meds

6



7

Which of the following is true?

“Obesity is easily treatable, if patients would just eat less and get off the couch, they’d lose weight.”

“Obesity is a complex, multifactorial disease caused by genetic, hormonal, cultural and societal factors.”

8

Which of the following is true?

“Given its complex nature, obesity is best treated with individualized nutrition and activity plans, behavioral health, pharmacologic and surgical modalities.”

“Obesity can be best treated with diet, exercise plans and sometimes medications or surgery.”

9

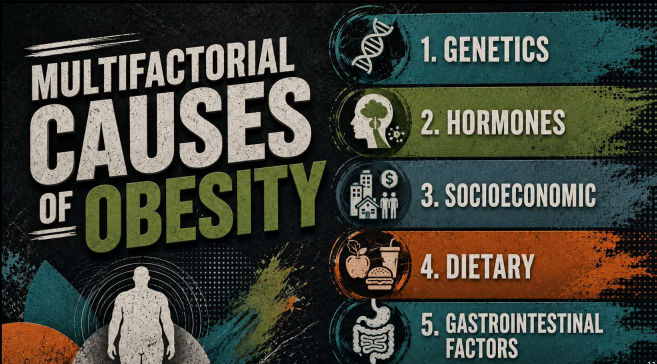
Obesity pathophysiology



- Impairs health due to associated risk of developing...
 - Type 2 diabetes
 - Cardiovascular disease
 - Hypertension
 - Hyperlipidemia
 - Cancer
- Second most preventable cause of death – smoking is #1**
- Economic burden of obesity: \$147 to \$210 billion/annually in U.S.

10

MULTIFACTORIAL CAUSES OF OBESITY



1. GENETICS
2. HORMONES
3. SOCIOECONOMIC
4. DIETARY
5. GASTROINTESTINAL FACTORS

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Obesity pathophysiology

Genetics

- Genetics – extremely heritable condition
- Over 500 obesity-related genes
- Eight major genes are related to adiposity and weight gain

Leptin (LEP)	Single-minded homolog 1 (SIM1)
Leptin receptor (LEPR)	Brain-derived neurotrophic factor (BDNF)
Proopiomelanocortin (POMC)	Neurotrophic tyrosine kinase receptor type 2 gene (NTRK2)
Prohormone convertase 1 (PCSK1)	
Melanocortin 4 receptor (MC4R)	

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Obesity pathophysiology

Hormones

- Glucagon-like peptide-1 (GLP-1)
 - Secreted from the L cells of the lower intestines and colon
- Glucose dependent insulintropic polypeptide (GIP)
 - Secreted from K-cells of upper small intestine
- GLP-1 and GIP degraded by dipeptidyl peptidase (DPP-4)
 - DPP-4 inhibitor for diabetes results in some weight loss
- Other hormones (secreted by adipocytes)
 - Leptin and adiponectin – appetite and energy regulation
 - Resistin – proinflammatory, increases production of glucose
 - Visfatin – promotes tissue inflammation, insulin resistance?

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13

Obesity pathophysiology

Hormones

- Benefits of GLP-1 and GIP
 - Stimulate insulin secretion only after an oral glucose load
 - Both contribute to 25–70% of postprandial insulin response
 - Delayed gastric emptying
 - Inhibiting production of glucagon by pancreatic alpha cells
 - Promote pancreatic b-cell proliferation
 - Decreased appetite

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HORMONES AND OBESITY

When hormone signaling is low, resistant, or short-lived, hunger rises and weight gain becomes easier.

1 INCRETIN HORMONES

GIP
Secreted by K cells in the upper small intestine

GLP-1
Secreted by L cells in the lower intestine and colon

DPP-4
breaks down GLP-1 and GIP

DPP-4 inhibitors used for diabetes can cause modest weight loss.

2 WHAT GLP-1 + GIP DO

- Increase insulin after oral glucose
- Provides 25-70% of the after-meal insulin response
- Lower glucagon from pancreatic alpha cells
- Support pancreatic beta-cell growth
- Slow gastric emptying
- Decrease appetite / increase fullness

3 ADIPOCYTE HORMONES

Leptin
Adiponectin
Resistin
Visfatin

Fat cells also send hormone signals that influence appetite, metabolism, inflammation, and insulin sensitivity.

When these signals are low or resistant → more hunger, poorer metabolism, and easier weight gain.

HORMONES ARE A MAJOR REASON OBESITY IS BIOLOGIC, NOT JUST BEHAVIORAL.

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Obesity pathophysiology

Socioeconomic

- Growing prevalence of **fast and refined foods**
- **Limited access** to affordable health foods
- **30% fewer supermarkets** in lower income neighborhoods
- **Poor neighborhood aesthetics**, safety in the area, and distance to commercial facilities = higher obesity rates
- **Non-Hispanic black** and **Hispanics** have increased obesity rates
- **≤ 6 or ≥ 8 hours of sleep** = weight gain

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Obesity pathophysiology

Nutrition

- Excess caloric intake of energy-dense foods
- Ultra-processed foods
- Sugar-sweetened beverages, liquid calories
- Large portion sizes
- Low fiber, fruit, vegetable, and whole-grain intake
- Irregular or late-night eating patterns

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17



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Obesity pathophysiology

Less movement in a modern society

- Smartphones, social media & increased screen time
- Video games, streaming & sedentary entertainment
- Computers, desk jobs & remote work
- Cars replacing walking/biking
- Technology & labor-saving conveniences
- Online shopping, food delivery & home services
- Reduced PE/recess & opportunities for active play

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**“WE DIDN'T
SUDDENLY LOSE
THE ABILITY TO MOVE.
WE BUILT A WORLD
WHERE WE DON'T
HAVE TO.”**

– Dr. Jason Gleason, DNP, FNP-C, FAANP

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Obesity pathophysiology

Gastrointestinal

- Gut microbiome diversity protects against weight gain
- Probiotics cause ↓ in biomarkers for obesity
 - Decreases inflammation
 - Enhances insulin sensitivity
- Antibiotic exposure can alter microbiota
 - **Excessive antibiotic use** increases risk of obesity

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Obesity pathophysiology

Other causes of obesity

- Reduced physical activity
- Excess calories
- Insomnia and sleep apnea
- Endocrine disorders
- Medications
- Decreased energy metabolism
- Eating disorders
- Depression, anxiety, etc.
- Protective mechanism in trauma victims

22

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Obesity pathophysiology

Impact of obesity

Life expectancy

- Obesity in adulthood is a strong predictor of early death
- Adults obese at 40 years lost 6–7 years of expected life
- People with obesity who smoked lose 12–14 years of expected life

Quality of life

- Obesity doubles risk of chronic disease
- Psychological burden
 - Public's preoccupation with thinness
- Women have increased burden compared to men
- Increased risk of eating disorders

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Obesity pathophysiology

Impact of obesity

Employment

- Obesity is one of the leading causes for discrimination in hiring
- More frequently noticed among females than males
- Reduced time working
- Self-reported work limitations

Economic impact

- 20% of all annual healthcare expenditures in the U.S.
- Medical costs are 30–40% higher for those with obesity
- Indirect costs from lost wages
- Elevated costs for disability and insurance claims

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Diagnosis

Body mass index (BMI) is used to diagnose obesity

- BMI of $\geq 30 \text{ kg/m}^2$
- BMI is calculated by $\text{weight (kg)} / \text{height (m)}^2$
- Limitations
 - Does not estimate adipose tissue mass
 - Overestimated in those with increased muscle mass or edema
 - Underestimate body weight in those who have lost muscle mass
- If patient has increased or decreased muscle mass...
 - Measure body fat percentage using calipers or scanners
 - Refer to Registered Dietician if calipers not available

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Diagnosis

Body Mass Index Ranges:



 **Overweight:**
25–29.9 kg/m²

 **Obesity Class I:**
30–34.9 kg/m²

 **Obesity Class II:**
35–39.9 kg/m²

 **Obesity Class III:**
 $\geq 40 \text{ kg/m}^2$

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WAIST CIRCUMFERENCE (WC) Diagnosis

★ MEASUREMENT & RISK ★

WAIST CIRCUMFERENCE (WC) MEASUREMENT

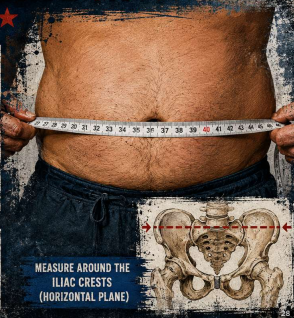
- Flexible tape
- Around the iliac crests in a horizontal plane

WAIST CIRCUMFERENCE AT HIGH RISK

- Man with WC >40 inches (101.6 cm)
- Woman >35 inches (88.9 cm)

HIGH WC FOR BMI VALUE OF 25-35 kg/m² INCREASED RISK OF...

- Cardiovascular disease
- Type 2 diabetes



MEASURE AROUND THE ILIAC CRESTS (HORIZONTAL PLANE)

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Diagnosis

- General considerations
 - BMI Misclassification can occur in muscular and frail patients
 - **Ensure privacy** for weigh in
- Person-centered communication
 - Nonjudgmental
 - Active listening
- Person first language – Avoid defining people by their condition
 - Person with “**obesity**” instead of “**obese person**”
 - Person with “**diabetes**” instead of “**diabetic**”
- Don't forget a dose of hope - Make big challenges small
 - As little as 3–7% weight loss can reduce diabetes risk

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DIAGNOSTIC STUDIES: Diagnosis

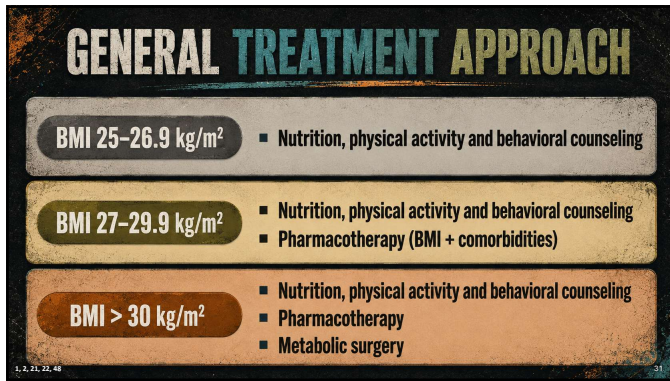
LAB STUDIES

- Fasting glucose
- Hemoglobin A1C
- Lipids profile
- Thyroid stimulating hormone
- Chemistry panel
- Liver function studies
- Creatinine/eGFR

OTHER STUDIES

- Additional tests if indicated
- ECG / Zio
- Echocardiogram
- Stress test
- Abdominal MRI with contrast
- Eye exam (R/O retinal disease)
- Testosterone

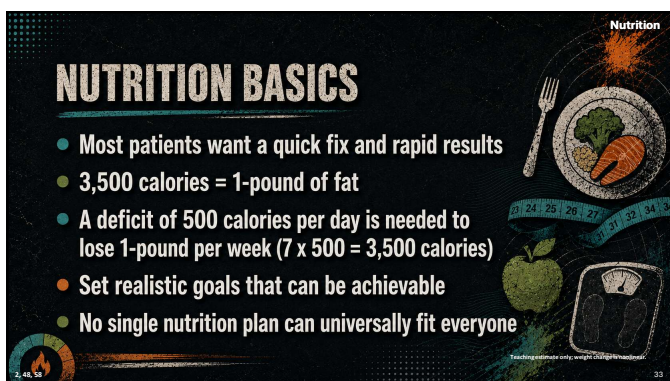
30



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THREE PRIMARY MICRONUTRIENTS:

- CARBOHYDRATES:** 4 CALORIES PER GRAM
- PROTEIN:** 4 CALORIES PER GRAM
- FAT:** 9 CALORIES PER GRAM

COMMON NUTRITION PLANS: ONE SIZE DOES NOT FIT ALL

• LOW-FAT	• LOW-CARBOHYDRATE	• MEDITERRANEAN
• ORNISH	• ATKINS	• PALEOLITHIC
• VEGETARIAN	• INTERMITTENT FASTING	

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INTERMITTENT FASTING: THREE MAIN FORMS

ALTERNATE DAY	5:2 FAST	TIME RESTRICTED
Energy restriction of 500–600 calories on alternate days	Eat normally for 5 days. 2 days limit daily calories to 500 calories for women and 600 calories for men	Daily calorie restriction based on window of time of 8–15 hours. Example: Eat 12 pm to 8 pm

MILD TO MODERATE WEIGHT LOSS – 3–8% FROM BASELINE
SIMILAR FINDINGS AT 52 WEEKS
NO NEED TO COUNT CALORIES

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THE PLATE METHOD

- Meal planning proven to lower A1C
- 9-inch (23 cm) plate
- ½ plate non-starchy vegetables
- ¼ plate protein
- ¼ plate carbohydrates
- Useful for literacy and numeracy challenges

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Fiber and Carbohydrates

Nutrition

Fiber: minimum of **14 grams per day**

- Caution when using psyllium fiber supplements
 - Go low and slow
 - Start with ½ teaspoon



Carbohydrates:

- 45–65%** of daily calories for most
- Each **10% reduction** in carb intake = reductions in A1C, fasting plasma glucose, body weight, lipids, systolic BP at 6 months



2, 48, 49 39

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Protein and Fat

Nutrition

Protein:

- 1.0–2.0 g/kg** body weight/day
- Lower for chronic kidney disease
- Consult with nephrologist
- Avoid** to treat hypoglycemia due to potential concurrent risk in endogenous insulin rise



Fat

- Total fat: **20–35%** of total daily calorie
- Saturated fats: **<7%** of total daily calories
- Type** is more important than total



2, 48, 49 39

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NOT ALL **FATS** AND **CARBOHYDRATES** ARE THE SAME

Nutrition

▪ **Saturated** fats are usually **solid** at room temperature



▪ **Unhealthy, refined** carbohydrates are usually **white and fluffy**



▪ **Unsaturated** (healthy) fats are usually **liquid** at room temperature



▪ **Healthy** carbs are usually **brown and heavy**



10, 11, 48, 49 39

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Nutrition

Daily calories to maintain and lose weight

Activity level multipliers:

Extremely sedentary x 10

- Very low mobility

Sedentary x 12

- Very little to no exercise

Moderate activity x 13

- Works out 3-5 days per week

Very Active x 17

- Works out 5-6 days per week

Multiple Current weight x 13 to 17 (depending on activity level) = average amount of calories consumed daily to **maintain current weight**

Subtract 500-750 daily calories to lose 1 to 1.5 pounds per week

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Nutrition

Daily calories to maintain and lose weight

Activity level multipliers:

Extremely sedentary x 10

- Very low mobility

Sedentary x 12

- Very little to no exercise

Moderate activity x 13

- Works out 3-5 days per week

Very Active x 17

- Works out 5-6 days per week

Example:

Tom does little to **no exercise** each week. **He weighs 250 lbs.** The average amount of calories he is taking in daily to maintain 250 lbs. is 3,000. (250 x 12)

To lose weight he would **subtract 500-750 calories from 3,000** for a total daily intake of 2,500 to 2,250 per week **to lose an average of 1 to 1.5 pounds per week.**

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Additional Support and Resources on Nutrition

Find Registered Dietician Nutritionists (RDNs)



Academy of Nutrition and Dietetics

Find Diabetes Care and Education Specialists (CDCES)



Certification Board for Diabetes Care and Education

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■ **Medical clearance**

- Must be cleared by provider to maximize patient safety

■ **Validated tools for clearance**

- Physical Activity Readiness Questionnaire (PAR-Q)
- Health/Fitness Facility Preparticipation Screening Questionnaire



Physical Activity
Readiness
Questionnaire
(PAR-Q)



Health/Fitness Facility
Preparticipation
Screening
Questionnaire

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Medical clearance: Special considerations

- Hypoglycemia
 - Pre-exercise glucose <90 mg/dL (5.0 mmol/L) add carbohydrate load
 - Can occur and **last for hours after exercise** due to insulin sensitivity
 - Glucose check before/after exercise
 - Always have glucose available to treat hypoglycemic events
 - Glucose tabs
 - Glucose gel/cake gel

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Medical clearance: Special considerations Movement

- Retinopathy
 - Vigorous physical activity **contraindicated** with proliferative (advanced) or moderate non-proliferative (early) diabetes retinopathy
 - Trigger vitreous hemorrhage or retinal detachment
 - Consult eye care specialist prior to exercise for those at risk
- Renal disease
 - Physical activity can increase urinary albumin excretion
 - No evidence that vigorous-intensity exercise accelerates rate of progression of CKD
 - No specific exercise restriction for people with CKD

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Medical clearance: Special considerations Movement

- Peripheral neuropathy
 - Decreased pain sensation and higher pain threshold
 - Can lead to...
 - Skin breakdown
 - Infection
 - Charcot joint destruction due to repetitive trauma
 - Due to loss of protective sensations

encourage

- Use of proper footwear
- Daily foot inspections and prompt follow-up for changes
- 150 minutes per week of aerobic activity improves neuropathy

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Medical clearance: Special considerations Activity modalities

- Autonomic neuropathy
 - Increase risk of exercise-induced injury
 - Decreased cardiac responsiveness to exercise
 - Postural hypotension
 - Impaired thermoregulation
 - Impaired night vision due to impaired pupillary neuropathy
 - Increased risk of hypoglycemia
 - Independent risk factor for cardiovascular death and silent myocardial ischemia
 - **MUST** have cardiac investigation prior to intense physical activity

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**Aerobic Physical activity:
How much and how often?**

Maintain current weight 150 minutes per week	Lose weight 200-300 minutes per week
--	--

Muscle Strengthening exercises at least 2-3 times per week

17.18 49

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Physical activity recommendations for adults

- Spread over at least 3 days
- No more than 2 consecutive days without activity
- Inactive individuals: "Start low and go slow"
- Start with lower intensity activities
- Gradually increase the frequency and duration
- Utilize appropriate gear and sports equipment
- Chose safe environments
- Structured exercise over 8 weeks lowers A1C by 0.66%
- Consider walking, aquatic therapy, High intensity interval training (HIIT)

17.18 50

50

Prescription for aquatic therapy

- Billing CPT 97113
- Medically necessary
- Chronic musculoskeletal conditions typically accepted
- Individual payors may have different criteria
- Bill time (15-minute increments)

17.18 51

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Movement

- Physical activity recommendations **for children**
 - **60 minutes or more per day** of enjoyable moderate activity
 - Running, swimming, dancing, bicycling, etc.
 - Playground equipment participation and physical education class
 - Losing ground with shift to academic improvement
 - Shift to afterschool sports
 - Students participation is challenging
 - Unaffordable for some families
 - Scheduling demands
 - **Great opportunity for NPs to advocate for physical education**
 - Age-appropriate, muscle-strengthening exercises 3 times/week

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Movement

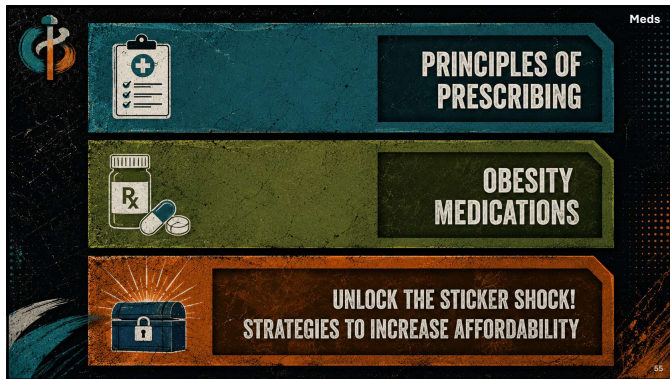
- Physical activity recommendations **for older adults**
 - Consider ordering physical/aquatic therapy first
 - Even for those with dementia or frailty when safe
 - Perform both aerobic and muscle-strengthening exercises
 - If 150 minutes per week is not tolerated
 - Encourage activity that they can do
 - Get creative
 - Always maintain safety
 - Balance training and fall prevention exercises
 - Performed at least 3 times per week to reduce the risk of age-related function loss

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53

54

54



55

Indications

- BMI >30 kg/m²
- BMI of 27–29.9 kg/m² with comorbid conditions (diabetes, hypertension, etc.)
- Continue weight loss after changes in lifestyle and behavioral
- Treatment failure with lifestyle and behavioral modalities
- Use in conjunction with the initiation of a weight loss program

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While on medications

- Nurse visit for first injection education
- Assess monthly for first 3 months
- Assess every 3 months after
- Early responders have better outcomes
 - $>5\%$ weight loss after 3 months should continue medication
 - $<5\%$ weight loss after 3 months **unlikely** continued use is helpful
- Refer to mental health services

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Obesity medications				Meds
Medication and MOA	WT Loss	Common side effects	Safety	Avg Cost
Phentermine (Adipex-P[®]) Appetite suppressant Only short term ≤12 weeks	3-7%	Stimulant, dry mouth, constipation, anxiety, Headache, ↑ BP	Avoid in any heart disease, uncontrolled BP, glaucoma, depression, anxiety, dependency	\$10 to \$15 30 days
Orlistat (Xenical[®]) (Alli[®]) Gastric/pancreatic lipase inhibitor Blocks 30% fat absorption	3-5%	Diarrhea, flatulence, oily stools (oil slick), abdominal discomfort	↓ Efficacy of cyclosporin ↓ Efficacy of levothyroxine ↓ Malabsorption of fat-soluble vitamins (A, D, E, K) Cholelithiasis, nephrolithiasis	Rx \$200 OTC \$70 30 days
Phentermine/topiramate (Qsymia[®]) Appetite suppressant	8-10%	Stimulant, dry mouth, constipation, anxiety, Headache, ↑ blood pressure	Avoid in any heart disease, uncontrolled BP, glaucoma, hyperthyroidism, depression, anxiety, pregnancy, nursing	\$100 to \$200 30 days
Naltrexone/bupropion (Contrave [®]) Targets Mesolimbic system and hypothalamus to decrease hunger	5-10%	Dry mouth, dreams, constipation, anxiety, Headache, ↑ blood pressure, N/V	Avoid with uncontrolled BP, anorexia, bulimia, seizure disorder, opiate/alcohol use, anxiety Can increase suicidal thoughts	\$99 to \$260 30 days

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Obesity medications				Meds
Medication and MOA	WT loss	Common side effects	Safety	Avg. Cost
Liraglutide (Saxenda[®]) GLP-1 Agonist First generation – FDA approved in 2014 Injected daily	5-8%	Nausea, diarrhea, constipation, abdominal discomfort, headache, tachycardia	Avoid gastroparesis or history of pancreatitis Caused thyroid cancer in rodents.	>\$1,000 30 days
Semaglutide (Wegovy[®]) GLP-1 Agonist / Injected weekly FDA Approved 2021 Obesity 2024 Reduce CV risk in those with hx cardiovascular events (MI/CVA) 2025 Metabolic dysfunction-associated steatohepatitis (MASH) Wegovy HD 7.2 mg approved 2026	Injectable 2.4 mg 15% Oral 13-17% 7.2 mg 19-21%	Nausea, diarrhea, constipation, abdominal discomfort, headache, tachycardia	Avoid in gastroparesis or history of pancreatitis, MCT or MENS 2) Caused thyroid cancer in rodents	\$199 to \$399 30 days
Tirzepatide (Zepbound[®]) GLP-1 and GIP Agonist / Injected weekly FDA Approved 2023 Obesity 2024 Sleep apnea with obesity	20-22.5%	Nausea, diarrhea, constipation, abdominal discomfort, headache, tachycardia	Avoid gastroparesis or history of pancreatitis Caused thyroid cancer in rodents	\$299 to \$449 30 days

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“Friends don’t let friends prescribe Ozempic[®] and Mounjaro[®] for those without diabetes”

Obesity

Semaglutide injection (Wegovy[®])
GLP-1 agonist by Novo Nordisk

Tirzepatide injection (Zepbound[®])
GLP-1 and GIP agonist by Lilly

Diabetes

Semaglutide injection (Ozempic[®])
GLP-1 agonist by Novo Nordisk

Tirzepatide injection (Mounjaro[®])
GLP-1 and GIP agonist by Lilly

Semaglutide oral (Rybelsus[®])
GLP-1 agonist by Novo Nordisk

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DEEP DIVE

GLP-1 and GLP-1/GIP Agonists

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Semaglutide (Wegovy®) and Tirzepatide (Zepbound®)

Industry leaders in treatment of obesity

INITIATION AND TITRATION

- Wegovy®: Start 0.25 mg → titrate q4wk → 0.5, 1.0, 1.7, 2.4 mg
- Zepbound®: Start 2.5 mg → titrate q4wk → 5.0, 7.5, 10, 12.5, 15 mg

Rotate injection sites

Refrigerate pens

MISSED DOSE

- Wegovy®: take it within 48 hours or wait until next dose
- Zepbound®: take it within 4 days or wait until next dose

FIRST DOSE DURING NURSE VISIT IN THE OFFICE

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New Kids on the Block

Oral Wegovy + Wegovy HD vs Foundayo

WEGOVY	semaglutide tablets + HD 7.2 mg pen	FOUNDAYO	orforglipron
MANUFACTURER	Novo Nordisk	MANUFACTURER	Eli Lilly and Company
MOA	GLP-1 receptor agonist	MOA	Oral non-peptide GLP-1 receptor agonist
ORAL TABLETS	1.5 mg daily x30 days → 4 mg x30 → 9 mg x30 → 25 mg daily	DOSING	0.5 mg daily → 2.5 mg after 30 days → 5.5 mg after 30 more days → may increase q30+ days to 9, 14.5, or 17.2 mg
HD PEN	7.2 mg injection once weekly	HOW TO TAKE	Once daily • with or without food • swallow whole • do not crush/chew
HOW TO TAKE	Tablets: empty stomach AM • water only (up to 4 oz) • swallow whole • wait 30 min before food/drink/oral meds	CONTRAINDICATIONS	MTC/MEN 2 • serious hypersensitivity
CONTRAINDICATIONS	MTC/MEN 2 • serious hypersensitivity	COST	Self-pay starts at \$149/mo • most doses \$199-\$299/mo
COST	Tablets: \$149-\$299/mo • HD pens: about \$399/mo self-pay		

QUICK TAKE

Wegovy: oral tablets plus new weekly 7.2 mg HD option

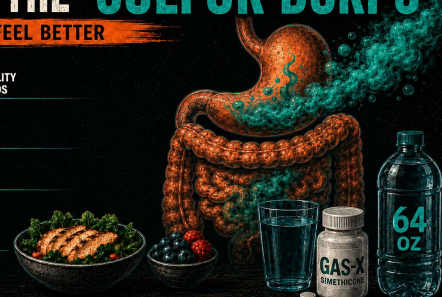
Foundayo: oral-only option with more flexible dosing with food

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TREATING THE "SULFUR BURPS" Meds

TIPS TO FEEL BETTER

-  **OCCUR DUE TO** CHANGES IN GUT MOTILITY AND SULFUR RICH FOODS
-  **STAY HYDRATED** 64 OUNCE OF FLUID INTAKE A DAY
-  **SMALLER MEALS**
-  **AVOID OR LIMIT** SULFUR RICH FOODS (EGGS, PROCESSED MEATS, ETC.)
-  **SIMETHICONE** (GAS-X)



21, 22 64

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ALLODYNIA/DYSESTHESIA Meds

-  **BURNING, TINGLING, OR PAINFUL** SKIN SENSITIVITY TO LIGHT TOUCH
-  **UNCOMMON;** MAY BE DOSE RELATED
-  **CAN OCCUR DURING DOSE** TITRATION THEN **RESOLVES/IMPROVES**
-  **CONSIDER DOSE REDUCTION OR** **DISCONTINUATION** IF SEVERE
-  **MECHANISM REMAINS UNKNOWN**



21, 22, 59, 60 65

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Safety and contraindications Meds

- Major contraindications:
 - Gastroparesis
 - Pregnancy
 - Medullary thyroid cancer (MTC)
 - Multiple endocrine neoplasia (MEN 2)
 - Pancreatitis
 - Severe chronic kidney disease (diet changes = volume depletion)
 - February 2026:** Suicide Ideation warning removed by FDA
 - Continue routine mood/SI screening **based on patient history**
- Zepbound® (and possibly Wegovy®): may reduce oral contraceptive efficacy (slowed gastric emptying) = backup contraception (IUD?)

21, 22, 31 66

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Peri-operative Considerations

- Routine 7-day hold of weekly agents is no longer recommended
- GLP-1/GLP-1-GIP agents may delay gastric emptying → aspiration risk
- Most stable, asymptomatic patients may continue therapy
- Higher risk: dose escalation, high dose, or active GI symptoms
 - High-risk plan: 24-hour liquid diet ± gastric ultrasound/anesthesia precautions
 - Delay elective surgery if significant GI symptoms are present

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Peri-operative Considerations

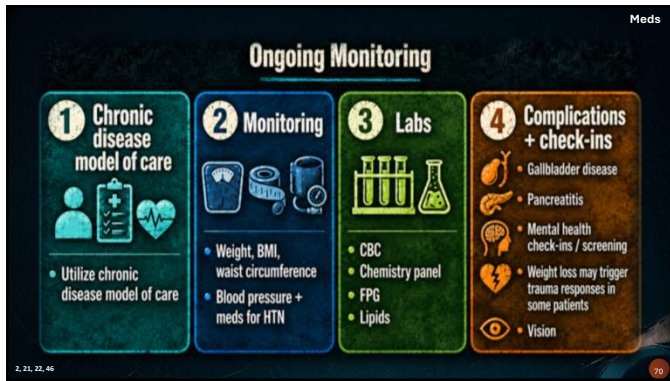
- Who made the change to this guideline in October 2024?
 - Multi-society clinical practice guidance:
 - American Society of Anesthesiologists (ASA)
 - American Gastroenterological Association (AGA)
 - American Society for Metabolic and Bariatric Surgery (ASMBS)
 - International Society of Perioperative Care of Patients with Obesity
 - Society of American Gastrointestinal and Endoscopic Surgeons (SAGES)

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Vision and eye health

- Worsening retinopathy in those with diabetes
 - Rapid drops in blood sugar = transitory retinopathy
 - Baseline and routine diabetes eye screenings are very important
- Non-Arteritic Anterior Ischemic Optic Neuropathy (NAION) – Rare
 - Sudden, painless vision loss in one eye
 - Due to rapid changes in blood sugar causing reduced blood flow to optic nerve = permanent vision loss
 - Immediate referral to nearest emergency department
 - No effective treatment
 - Low risk: 8-12 cases per 10,000 (<0.2% risk per year)

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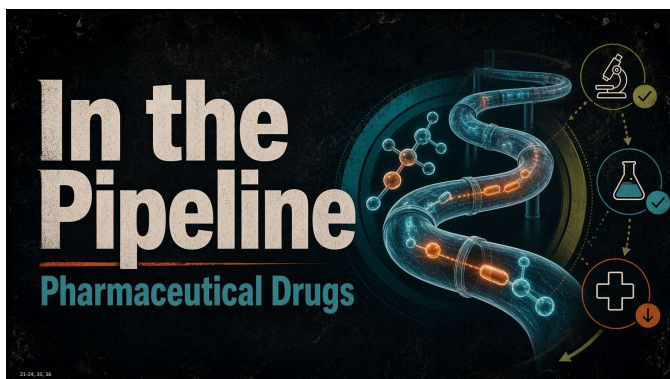
Meds

Long-term therapy

- Continuation of full-dose therapy is key to maintain weight loss
- If patient has significant side effects
 - Consider reducing dose
 - Wegovy from 2.4 mg to 1.7 mg once a week
 - Zepbound from 15 mg to 10 mg once a week
 - Increase dose for periods of weight gain
 - Some providers consider reducing frequency
 - Move from weekly to every other week
 - No studies/trials offer evidence to support this
 - ½ life of Wegovy® = 7 days
 - ½ life of Zepbound® = 5 days

22, 24, 25, 34 71

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25

Insurance preauthorization – “Build the case”

- Document thoroughly in patient record
 - WT, BMI, BP, Lab results
 - Most insurers require BMI ≥ 30 or ≥ 27 w/ comorbidities
- Comorbidities and contraindications to other medications
 - List all obesity related issues (HTN, T2DM, Obstructive sleep apnea, dyslipidemia, osteoarthritis, back pain, GERD, depression, anxiety, etc.)
- Lifestyle history and medically supervised program
 - 3-6 months participation in structured/supervised nutrition, activity and behavioral program without sufficient success

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Insurance preauthorization

- Anticipate common denial reasons
 - Obesity drugs are excluded
 - Some insurers will cover for diabetes or sleep apnea with obesity
- Tiering/step therapy: Require trying cheaper medications
 - Document treatment failure/intolerance
 - Consider and document why patient cannot take other medications – most have many contraindications
 - Contrave (Naltrexone/Bupropion)
 - Qsymia (Phentermine/Topiramate)
 - Phentermine
 - Xenical (and lower dose OTC version Alli)

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Insurance preauthorizations: Common contraindications to meds

Contrave® (Naltrexone/ Bupropion)	Qsymia® (Phentermine/ Topiramate (TPM))	Adipex-P® Phenteramine	Xenical® / OTC Alli®
<ul style="list-style-type: none"> Uncontrolled hypertension Seizure disorder Opioid use Already taking bupropion Anxiety 	<ul style="list-style-type: none"> Uncontrolled hypertension/CAD Hyperthyroidism Glaucoma Depression (TPM) Anxiety Renal stones (TPM) Metabolic acidosis Increase calcium excretion in urine 	<ul style="list-style-type: none"> Uncontrolled hypertension/CAD Hyperthyroidism Glaucoma Drug misuse or dependency Anxiety 	<ul style="list-style-type: none"> GI intolerance (oil slick) Gallbladder disease/stones Renal stones Medication malabsorption (cyclosporine and levothyronine) Vitamin Deficiency

BOTTOM LINE: Contraindications can help you "Build the case" for approval

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Patient assistance programs:

Assistance/Savings links

WEGOVY

ZEPBOUND

FOUNDAYO

56, 57, 62

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Sample prior authorization letter

Office letterhead

Date: _____

Dear XXXX:

I am the primary care provider for patient name, patient date of birth. Patient name has a history of class of obesity with a current BMI of XX (XX inches, XX lbs) in addition to list of chronic, disease and medical health issues. I am requesting prior authorization and for exception approval for Wegovy or Zepbound with an initial dose of 80 mg SC injection weekly followed by monthly titration until monthly dose of XX mg is achieved for maintenance.

Patient name has and will continue to actively participate in a medically supervised weight loss program which focuses on behavioral, nutrition and activity therapy modalities of care. They have not lost adequate weight with lifestyle modifications alone.

Patient name cannot take Contrave, Qsymia, Phentermine or Xenical because XX.

Patient name has no contraindications for Wegovy or Zepbound and if approved he/she agrees to use it as prescribed.

I've attached the prior approval request and the exception form for patient name. Thank you for your consideration. I am hopeful that patient name will be approved for this vital and lifesaving component of his/her comprehensive weight loss plan of care. If you need any other information please reach out.

Sincerely,

Provider's name and credentials

Provider's address, phone, fax number and email

57, 58

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Federal Blue Cross / Blue Shield® weight loss medication request form

(Be sure to check date)

57, 58

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81

Federal Blue Cross / Blue Shield® medication tier exception form



Blue Cross of Michigan
Blue Shield of Michigan
Medicaid Exception Request Form

Member Information

Member ID: [] Plan: []
 Date of Birth: [] Sex: []
 Address: [] City: [] State: [] Zip: []
 Phone: [] Email: []

Prescriber Information

Prescriber Name: []
 Address: [] City: [] State: [] Zip: []
 Phone: [] Email: []

Medication Information

Medication Name: []
 Dosage: []
 Indication: []

Other Information

Other Medications: []
 Other Health Conditions: []

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Tricare® weight loss medication request form
(Be sure to check date, bottom of page 4)



TRICARE Prior Authorization Request Form for
Weight Loss Medication (Prescription)

Form Number: 4311

Member Information

Member ID: [] Plan: []
 Date of Birth: [] Sex: []
 Address: [] City: [] State: [] Zip: []
 Phone: [] Email: []

Prescriber Information

Prescriber Name: []
 Address: [] City: [] State: [] Zip: []
 Phone: [] Email: []

Medication Information

Medication Name: []
 Dosage: []
 Indication: []

Other Information

Other Medications: []
 Other Health Conditions: []

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HOT OFF THE PRESS: Medicare GLP-1 Bridge

- Started **July 1, 2026**
- Eligible Medicare Part D patients:
\$50/month
- Weight-management drugs currently include:
 - Wegovy**
 - Foundayo**
 - Zepbound KwikPen**
- Requires **prior authorization**
- Program runs through **December 31, 2027**

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Medicare GLP-1 Bridge Workflow

Send the Rx first → pharmacy submits Bridge claim → PA is triggered → NP completes PA.

- NP sends the prescription to the patient's pharmacy
- Pharmacy submits the prescription claim to the Medicare
- Bridge system recognizes that a PA is required and rejects/pends the claim for authorization
- The pharmacy then sends the PA request to the NP, usually electronically or by fax within 24–72 hours
- NP completes the Bridge prior authorization
- Pharmacy resubmits the claim and dispenses medication

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Gleason's recommendations

- ☐ Prior authorization letter
- ☐ Insurance prior authorization form
- ☐ Insurance tier exception request form (Tier 3 to Tier 2)
- ☐ Written prescriptions for mail order pharmacy (if applicable)

Insurance preauthorization:
What to submit to insurance

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Challenges of compounding meds

- Compounding of Semaglutide (Wegovy®) and Tirzepatide (Zepbound®) was allowed
 - Drugs were placed on FDA drug shortage list
 - Allow compounding until supply stabilized
 - Major shortage 2022 to 2024
 - April 22, 2025: authorization expired – shortage stabilized

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Challenges of compounding meds

Compounding is now prohibited

- Federal Food, Drug and Cosmetic Act 503A(b)(1)(D)
 - Prohibits compounding pharmacies from creating drug products that are **essentially copies** commercially available drug products
- Drug Quality and Security Act of 2013
 - Compounding should be limited to patient-specific needs, **not routine replication** of existing commercial products
 - Title 1: Permits compounding only if there's a **documented** medical necessity that constitutes a "**significant difference**" for an **individual patient**

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Challenges of compounding meds

- Some pharmacies using "work arounds"
 - Adding Vitamin B12, folate and other substances make the product "different" and thus arguing not an "essential copy"
 - FDA guidance: adding an ingredient **does not** qualify as legitimate **unless** it provides **significant clinical difference** for the **individual patient** as documented by the **prescriber**.

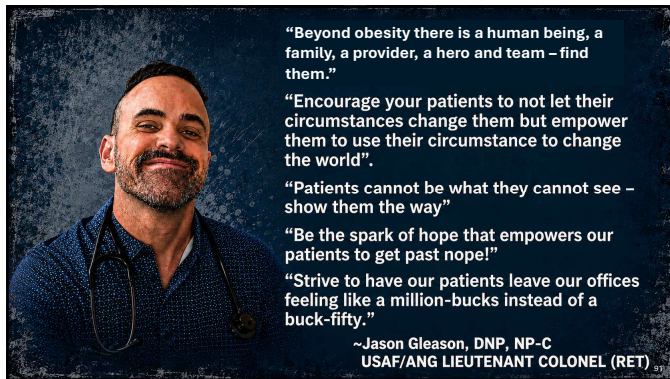
Example: Susan has a documented B12 deficiency and requires injectable B12 supplementation. Her NP documents that combining B12 with semaglutide achieves a clinically meaningful difference versus separate injections to reduce injection burden. (This could possibly qualify but has to be **evidence based**)

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Challenges of compounding meds

- FDA has become more aggressive in enforcement
- Warning letter, product seizure, injunctions, recalls
- Civil and criminal penalties (every Rx can be one violation)
 - Misdemeanor violations (no intent required)
 - \$1,000 per violation and/or up to 1 year in prison
 - Felony violations (repeat or intent to defraud/mislead)
 - Up to \$10,000 per violation and/or up to 3 years in prison
- State-level penalties – variable
- Potential to lose license
- Civil malpractice
- Insurance fraud investigations (if claims submitted improperly)

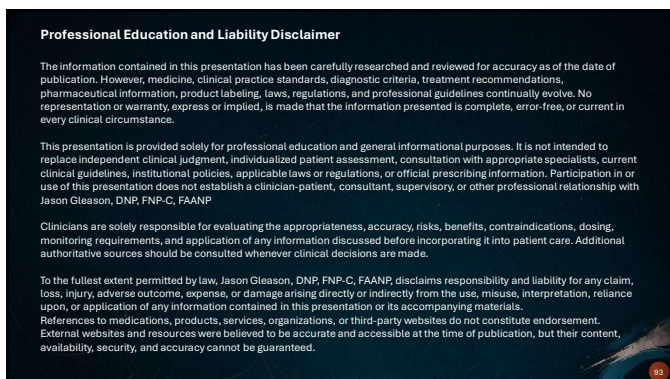
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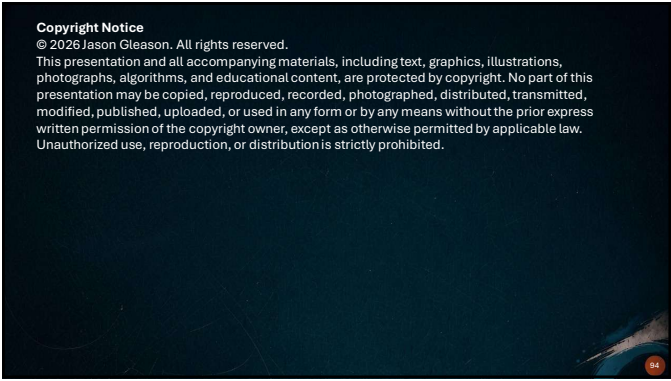


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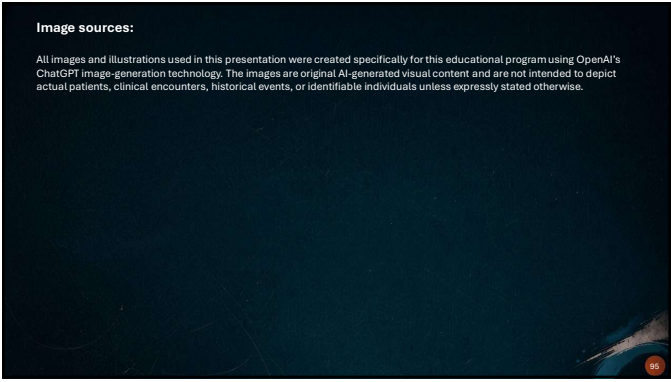
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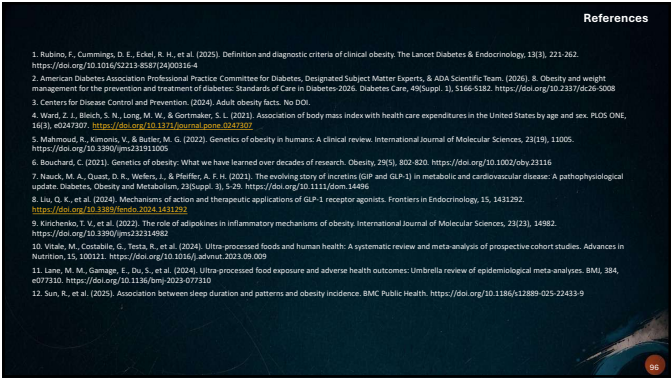
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