



GHAPP

Gastroenterology & Hepatology
Advanced Practice Providers

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GHAPP

Gastroenterology & Hepatology
Advanced Practice Providers

Managing Obesity

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Disclosures

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Disclosures

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No financial relationships to disclose

Objectives

- Think differently about our approach to obesity
- Review medical options for weight loss
- Review endoscopic options for weight loss and their data
- Review surgical options used for weight loss and GI complications that can result

Why address obesity in the GI clinic?

1. Obesity contributes so many of our GI diagnoses
2. Obesity is multifactorial and deserves a multidisciplinary approach
3. We're APPs... we can do that

Quantified Risk Ratios of GI disorders in Obesity

		Risk (95% CI)
Esophagus	GERD	OR = 1.94 (1.46-2.57)
	Erosive esophagitis	OR = 1.87 (1.51-2.31)
	Barrett Esophagus	OR = 4.0 (1.4-11.1)
	Esophageal adenocarcinoma	Men: OR = 2.4 (1.9–3.2) Women: OR = 2.1 (1.4–3.2)
Stomach	Erosive gastritis	OR = 2.23 (1.59-3.11)
	Gastric cancer	OR = 1.55 (1.31-1.84)
Small intestine	Diarrhea	OR = 2.7 (1.10-6.8)
Colon and rectum	Diverticular disease	RR = 1.78 (1.08-2.94)
	Polyps	OR = 1.44 (1.23-1.70)
	Colorectal cancer	Men: RR = 1.95 (1.59-2.39) Women: RR=1.15 (1.06-1.24)

		Risk (95% CI)
Liver	NAFLD	RR = 4.6 (2.5-11)
	Cirrhosis	RR = 4.1 (1.4–11.4)
	Hepatocellular carcinoma	RR = 1.89 (1.51-2.36)
Gallbladder	Gallstones disease	Men: RR = 2.51 (2.16–2.91) Women: RR=2.32 (1.17–4.57)
Pancreas	Acute pancreatitis	RR = 2.20 (1.82–2.66)
	Pancreatic cancer	Men: RR = 1.10 (1.04–1.22) Women: RR=1.13 (1.05–1.18)

What Is Obesity?

“Obesity is defined as a chronic, progressive, relapsing, multifactorial, neurobehavioral disease, wherein an increase in body fat promotes adipose tissue dysfunction and abnormal fat mass physical forces, resulting in adverse metabolic, biomechanical, and psychosocial health consequences.”¹

BMI >30

% Body Fat
Women: > 32%
Men: > 25%

Abdominal obesity
Women > 35 in waist
Men > 40 in waist

What is Obesity?

Deranged endocrine and immune responses¹



Sick Fat Disease (SFD)
(Adiposopathy)

- Elevated blood glucose
- Elevated blood pressure
- Dyslipidemia
- Other metabolic disorders

Abnormal and pathologic physical forces¹



Fat Mass Disease (FMD)

- Stress on weight-bearing joints
- Immobility
- Tissue compression (ie: sleep apnea, hiatal hernia)
- Tissue friction

Case Study #1

- A 44- year-old woman with a 50-lb weight gain over the past 10 years presents to the clinic request a prescription for weight-loss medication
- **What are key treatment options and considerations? How do you counsel this patient?**

Approach to the patient with overweight or obesity

- Broaching the subject of weight loss
- Medical Evaluation
 - Annual and symptom based screening for chronic conditions associated with obesity and important comorbidities of obesity and metabolic syndrome (T2DM, dyslipidemia, HTN, NAFLD)
 - Timely adherence to national cancer screening guidelines
 - ID contributing factors including genetics, disordered eating, sleep disorders, family history and environmental/socioeconomic causes
 - Screen for secondary causes of obesity based on physical exam (see next slide)
 - ID medications that contribute to weight gain

Selected Causes of Obesity

PRIMARY

- Monogenic disorders
 - Leptin deficiency
 - Melanocortin-4 receptor mutation
 - POMC deficiency
- Genetic Syndromes
 - Alstrom
 - Bardet-Biedl
 - Cohen
 - Froehlich
 - Prader-Willi

SECONDARY

- Drug induced (see next slide)
- Psychological
 - Depression
 - Eating disorders
- Neurologic
 - Brain injury
 - Brain tumor
 - Cranial irradiation
 - Hypothalamic obesity
- Endocrine
 - Cushing syndrome
 - Growth hormone deficiency
 - Hypothyroidism
 - Pseudohypoparathyroidism

Medications That Contribute to Weight Gain

Psychiatric
medications

Amitriptyline, imipramine, nortriptyline, citalopram, doxepin, fluoxetine, **mirtazapine**, paroxetine, phenelzine, sertraline, Clozapine, olanzapine, **quetiapine**, lithium, Perphenazine, Risperidone,

Antidiabetics

Insulin, Sulfonylureas, Thiazolidinediones,

Anticonvulsants

Carbamazepine, **gabapentin, pregabalin**, Valproic acid, Vigabatrin

Antihypertensives

Doxazosin, prazosin, terazosin, metoprolol, propranolol

Horomones and
steroids

Depo-medroxyprogesterone acetate, **Megestrol acetate, Corticosteroids, Glucocorticoids**, Progestins

Approach to the patient with overweight or obesity

- Nutritional Evaluation
 - Screen for nutrient deficiencies as appropriate
- Psychosocial evaluation
 - Screen for disordered eating, depression
- Physical activity/Exercise evaluation
 - Tracking, goals, past activities, physical limitations

Treatment

Treatments	BMI category (kg/m ²)				
	25 – 26.9	27 – 29.9	30 – 34.9	35 - 39.9	>40
Lifestyle modifications	With comorbidities	With comorbidities			
Pharmacotherapy		With comorbidities			
Endoscopy					As bridge therapy
Surgery				With comorbidities	

Drug	Phentermine	Orlistat (Xenical)	Phentermine/ Topiramate ER (Qsymia)	NaltrexoneSR/ bupropion SR (Contrave)	Liraglutide (Saxenda)
MOA	Adrenergic agonist	Lipase inhibitor	5-HT2c receptor agonist	Opioid receptor antagonist/dopamine and NE reuptake inhibitor	GLP-1 analog
Mean % TBWL	5.1%	3.1%	3.5%	4.8%	5.4%
Long term?	No	Yes	Yes	Yes	Yes
Controlled?	Yes	No	Yes	No	No
Side effects?	Dizziness, dry mouth, difficulty sleeping, irritability, N/V, D, C	Steatorrhea, flatus, urgency, incontinence	Paresthesia, dizziness, dysgeusia, insomnia, dry mouth, C	N/V, C, D, headache, dizziness, insomnia, dry mouth	N/V, D, C, hypoglycemia, HA, dyspepsia, fatigue, dizziness, abdominal pain, lipase elevations
Contra-indications	Nursing, CVD, MAOI use within 14 d, hyperthyroidism, glaucoma, history of addiction, alcohol use	Chronic malabsorption, cholestasis, shouldn't be taken with cyclosporine, thyroid, warfarin or anti-epileptics	Glaucoma, hyperparathyroidism, MAOI use within 14 d	Uncontrolled HTN, h/o seizures, bulimia, anorexia, use of opioid agonists or partial agonists, MAOI use w/ 14 days	Personal or family history of medullary thyroid carcinoma or MEN-2

Case Study #2

- 52-year-old obese woman with a 9-year history of type 2 diabetes complains of fatigue and difficulty losing weight
 - She attributes a large weight gain since being placed on insulin 6 years ago
- **What is your approach in managing this patient?**



Endoscopic options

- Orbera intragastric balloon **11.3%**
 - Space occupying. Delays stomach emptying
 - High rate of Nausea/vomiting, fullness, 1% risk of migration
 - Removed at 6 months. Can be re-placed
- Aspire Assist aspiration therapy **12%**
 - Facilitates partial removal of gastric contents
 - Less than 1% risk of peritonitis, ulceration, pain
- Endoscopic sleeve gastropasty (ESG) **20%**
 - Restrictive procedure, permanent
 - Delays gastric emptying

Orbera

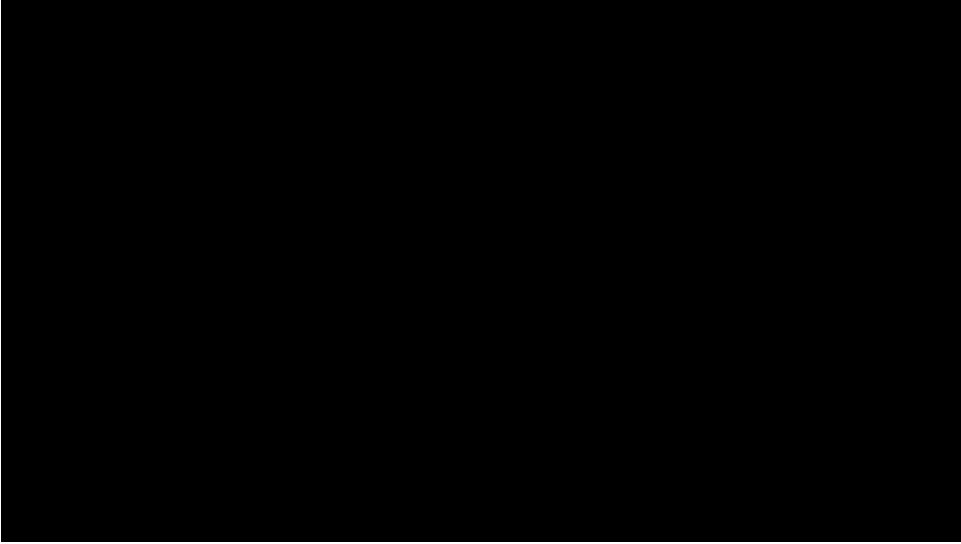
- Inserted via EGD
- Temporary. Removed after 6 months. Weight loss continues past this time
- N/V common for a few days after procedure
- Not covered by insurance



TAKES UP SPACE IN THE STOMACH
SLOWS DIGESTION

Orbera
SYSTEM

AspireAssist

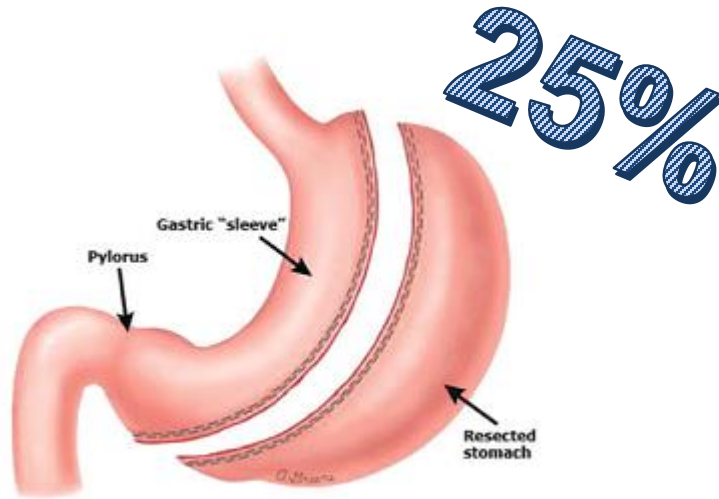
- 
- Placed via EGD
 - Can be used longer than a year
 - Requires close clinic follow-up
 - FDA approved for BMI > 30

Endoscopic sleeve gastroplasty (ESG)

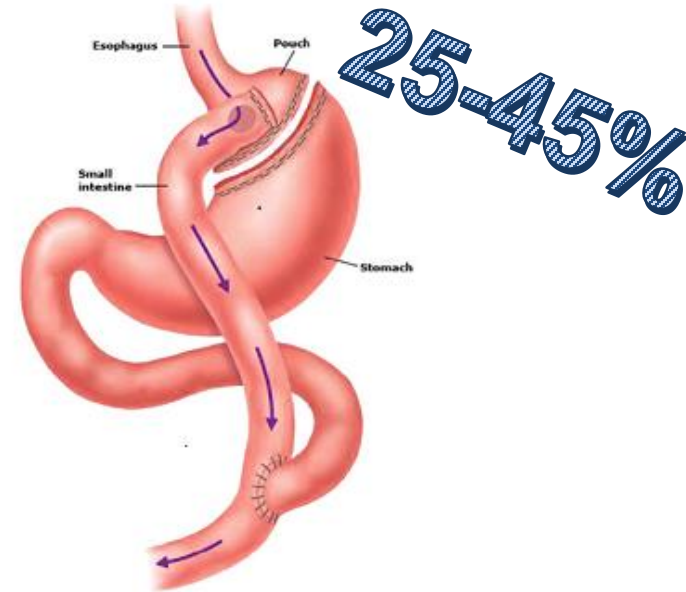
- Permanent
- Endoscopic, few risks
- Less GERD than with surgical sleeves
- 16% TBWL at 5 years
- Not covered by insurance

Surgery

Sleeve Gastropasty



Roux en Y Gastric Bypass



Factors to consider in treatment decisions

- Comorbidities
 - DM
 - Osteoarthritis
- Patient adherence
- Patient lifestyle
- CO\$T

Factors for success

- Use motivational interviewing techniques
- Create a positive office space, MPU and exam space
- Use “people-first” language
 - eg, Instead of the obese patient, try the patient who is overweight or had obesity
 - Stop labeling the individual by the disease

Citations

1. Bays HE, McCarthy W, Christensen S, et al. Obesity Algorithm Slides, presented by the Obesity Medicine Association. www.obesityalgorithm.org. 2020. <https://obesitymedicine.org/obesity-algorithm-powerpoint/>. Accessed 10/16/2020.
2. Acosta A, Streett S, Kroh, M, et al. White Paper AGA: POWER – Practice guide on obesity and weight management, education and resources. Clin Gastroenterol Hepatol. 2017;15(5):631-649.