

Lecture 19:

Pharmacologic and Surgical Approach to Obesity

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 The corner stones of weight management are diet and exercise.

Other options are:

- Behavioral Therapy.
- Pharmacotherapy.
- Surgery.

Behavioral Therapy:

 Offered by a psychotherapist, psychologist or psychiatrist.

Cognitive behavioral therapy (CBT) is used:

- 1) To help change and reinforce new dietary and physical activity behaviours.
- 2) To develop more positive and realistic thoughts about themselves.

- Strategies include in CBT are:
- 1) Self monitoring techniques:
 - Journaling
 - Weighing
 - Measuring food and activity
- 2) Stress management.
- 3) Stimulus control (e.g., using smaller plate, not eating while watching TV and in the car).
- 4) Family support.
- 5) Problem solving.

 When recommending any behavioral changes during CBT:

- Have the client to identify what, where, when, and how the behavioral changes will be implemented.
- 1) Have the client to keep a record of the changes to see progression in the next visit.

Pharmacotherapy:

- Indications of Adjuvant Pharmacotherapy:
- 1) BMI >30
- 2) BMI > 27 for those with any of the following comorbidities:
 - Diabetes mellitus.
 - High blood pressure.
 - Obstructive sleep apnea.
 - Dyslipidemia.
 - Non-alcoholic fatty liver.

Potential Targets of Pharmacotherapy:

• 1) To suppress appetite via centrally acting medications (Anorexiants)....the most common strategy).

• 2) To reduce the absorption of selective macronutrients from GI tract, such as fat.

Centrally Acting Anorexiant Medications:

- They affect satiety and hunger.
- They help clients reduce calorie intake.
- They affect on the hypothalamus.
- They regulate appetite by augmenting the neurotransmission of three monoamines:
- Norepinephrine.
- Serotonin (5 HT).
- Dopamine (to a lesser degree).

Central Acting Medications:

- Benzphentamine.
- Phendimetrazine.
- Diethylpropion.
- Mazindol.
- Phentermine.
- Sibutramine (Meridia):
- Serotonin and norepinephrine reuptake inhibitor.
- No addictive potential.
- Voluntarily withdrawn from the US market by the manufacturer in <u>October 2010</u> due to increased risk of nonfatal heart attack and stroke.

Peripherally Acting Medications:

- Orlistat (Xenical) is a lipase inhibitor.
- Lipase is an enzyme required for the breakdown of dietary fat into fatty acids.
- Orlistat acts in the stomach and small intestine.
- Blocks the digestion and absorption of about 30% of dietary fat.
- Has no systemic side effects and was approved for overthe-counter use in 2007.

Anti-Obesity Medications in Development:

• Empatic (Bupropion and Zonisamide)	?
• Contrave (Bupropion and Naltrexone)	2014
• Qsymia or Qnexa (Phentermine and	
Topiramate)	2012
• Belvig (Lorcaserin)	2012

Surgery:

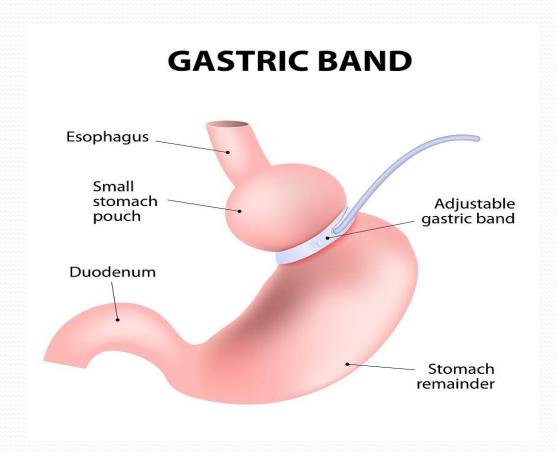
- Indications of Bariatric Surgery:
- 1) BMI 40 and over
- 2) BMI > 35 for those with any of the following comorbidities:
 - Diabetes mellitus.
 - High blood pressure.
 - Obstructive sleep apnea.
 - Dyslipidemia.
 - Nonalcoholic fatty liver.

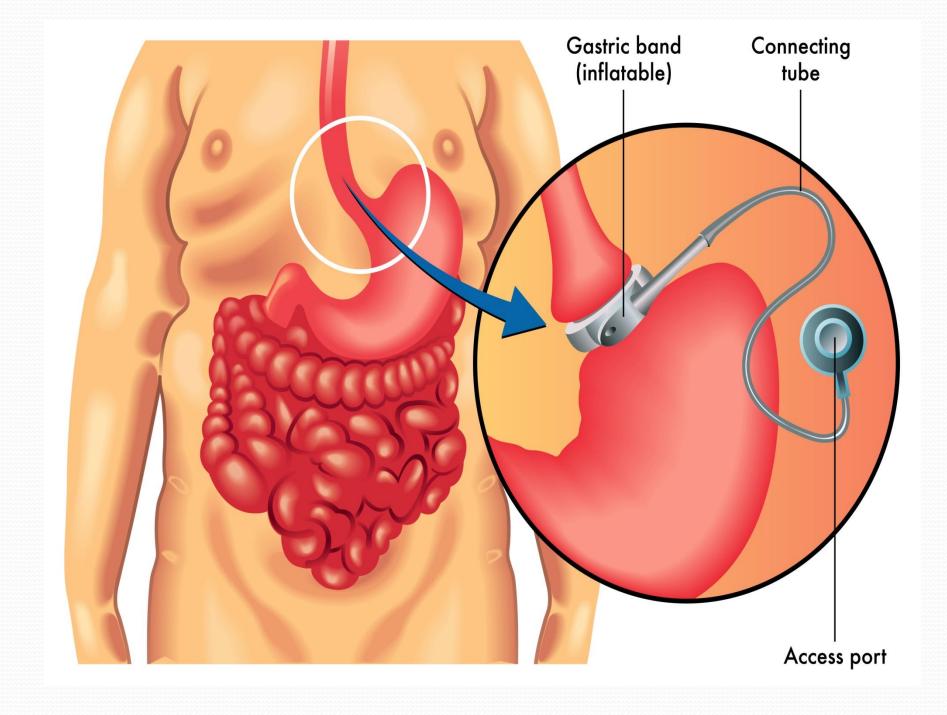
Bariatric Surgical Procedures:

• Restrictive:

- laparoscopic adjustable silicone gastric banding.
 - a) LAP Band.....approved in 2001
 - b) REALIZE Band.....approved in 2007
- Vertical Sleeve Gastrectomy.
- Vertical Banded gastroplasty.
- Restrictive Malabsorptive:
 - Roux-en-Y gastric bypass (RYGB).
 - Biliopancreatic diversion (BPD).
- Biliopancreatic diversion with duodenal switch (BPDDS)

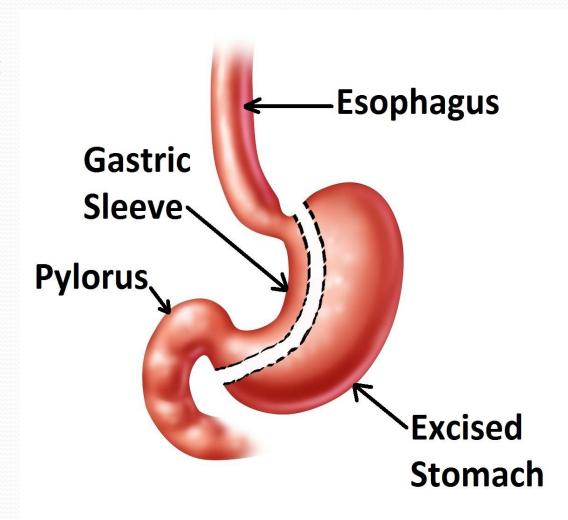
- Relatively easy surgical procedure.
- Inserted laparoscopically.
- Dietary deficiencies: uncommon
- Lesser weight loss





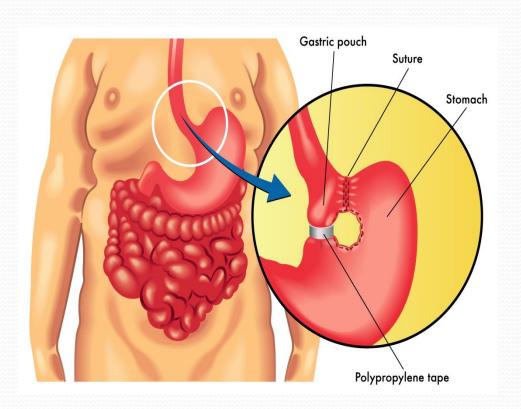
Vertical Sleeve Gastrectomy:

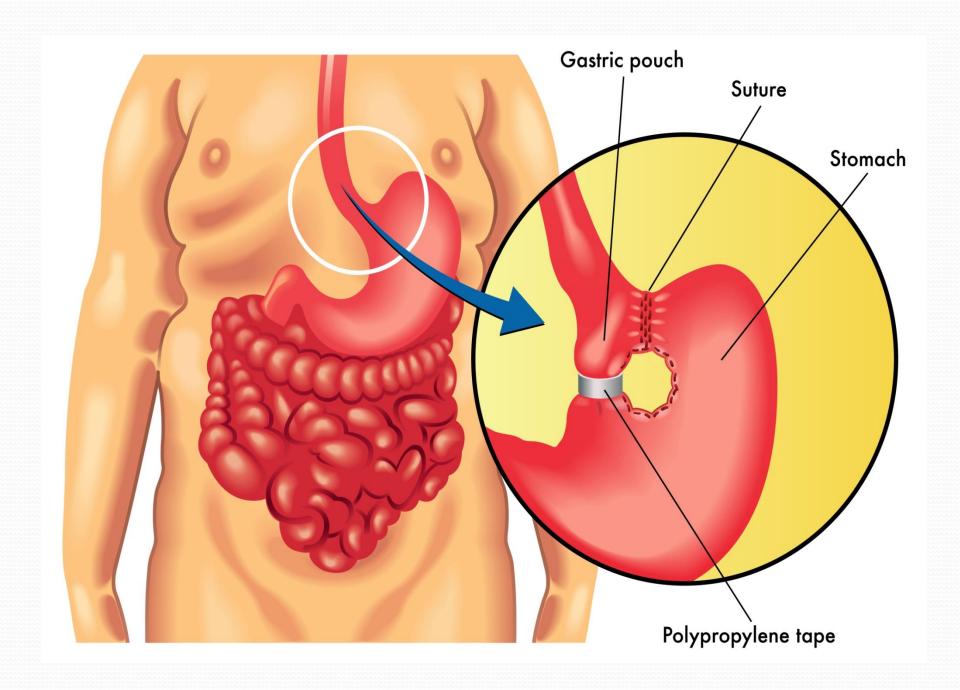
- Limited use.
- Dietary deficiencies: uncommon.
- Better results than Lap - Band



Vertical Banded Gastroplasty (Stomach Stapling):

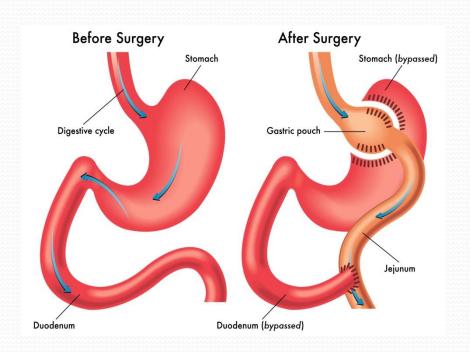
- Technically difficult.
- Less compliance.
- Dietary deficiencies: uncommon.

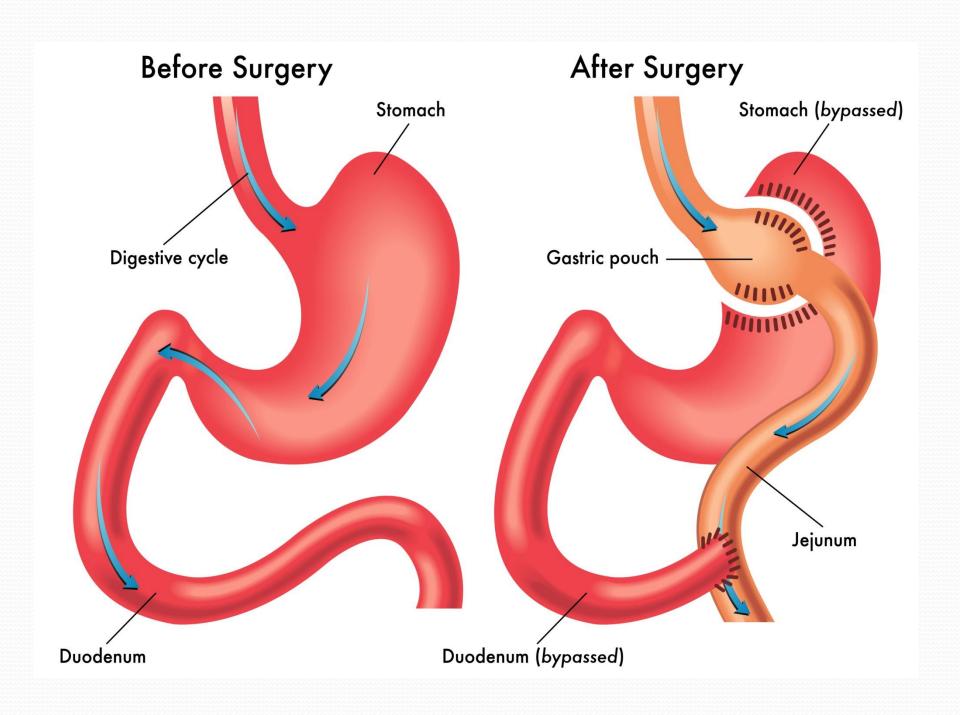




Roux-en-Y Gastric Bypass (RYGB):

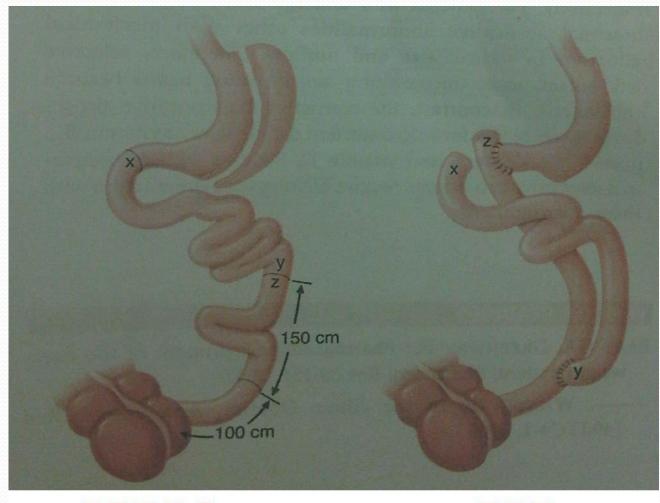
- Technically difficult.
- The most commonly performed.
- Dietary deficiencies: common.
- Long-term, sustained weight loss





Biliopancreatic Diversion (BPD).
Biliopancreatic Diversion with Duodenal Switch

(BPDDS).



BPDDS

BPD

Follow Up with Clients with Bariatric Surgeries:

- Communicate with the surgeon.
- The three restrictive malabsorptive procedures produce a 30-35% average total body weight loss that is maintained in nearly 60% of clients at 5 years.

• Dietary deficiencies are uncommon in restrictive forms.

 Dietary deficiencies (vitamin B12, Iron, folate, calcium and vitamin D) are common in restrictive – malabsorptive forms and they require lifelong supplementation.

Homework:

- 1) Describe how cognitive behavioral therapy could help an obese person.
- 2) When does an obese person might need medication therapy and/or bariatric surgery?

