



# Bariatric Surgery

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[www.obesityclinic.in](http://www.obesityclinic.in)

# Body Mass Index(BMI)

- Obesity is classified according to body mass index (BMI)
- Body Mass Index(BMI)  
=  $\text{weight}(\text{kg}) / \text{height}(\text{m}^2)$

# Classification

Weight

BMI

Normal range

18.50 – 23.5

Overweight

≥ 23.5 – 28.5

Obese

≥28.5

Severe Obesity/Morbid Obesity

≥35.00

# Treatment of Morbid Obesity

- Diet, exercise, and behavioral modification
  - Ineffective long term
- Pharmacotherapy
  - Minimal sustained weight loss
- Bariatric Surgery
  - Only effective treatment

# Eligibility for Surgery

- Patients have a Body Mass Index  $>40$  kg/m<sup>2</sup>
  - 40 kgs. or more overweight
- Patients have a Body Mass Index between 35 and 40 kg/m<sup>2</sup> with significant risk factors
- Patients have failed other medically managed weight-loss programs

# Ineligible Patients

## **Exclusion Criteria:**

- Obesity related to a metabolic or endocrine disorder
- History of substance abuse or untreated major psychiatric disease
- Surgery contraindicated or high risk
- Women who want to become pregnant within the next 18 months

# Preop Evaluation

- Lab inx
- Ugi scopy
- Usg abd
- CVS evaluation/ 2 D Echo
- Psychiatry evaluation
- Endocrine evaluation

# Current Bariatric Surgery Procedures

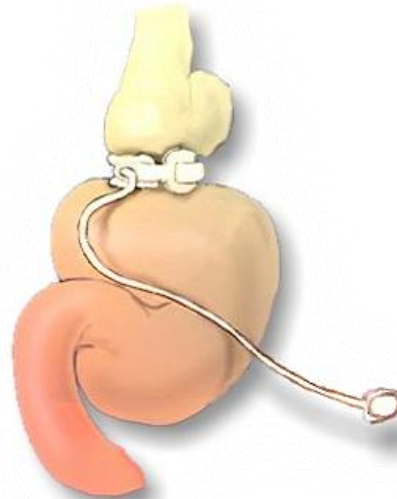
Classification	Procedure
Gastric Restriction	Sleeve Gastrectomy  Adjustable Gastric Band  Roux-en-Y Gastric Bypass
Primarily Restrictive & partially malabsorptive	
Primarily malabsorptive & partially restrictive	Bilio Pancreatic Diversion with duodenal switch  BPD  Distal Gastric Bypass



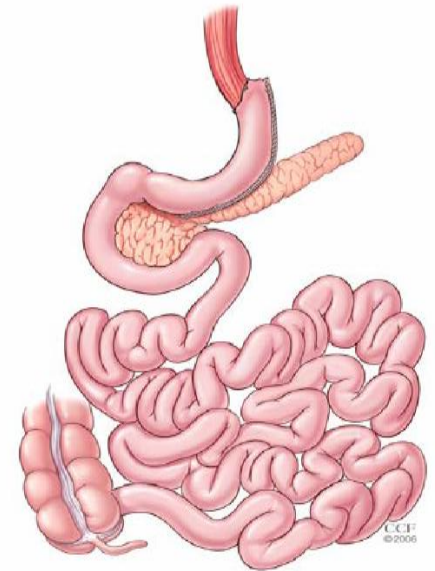
# Three Types of Most Commonly Performed Weight Loss Surgery Procedures



Gastric Bypass



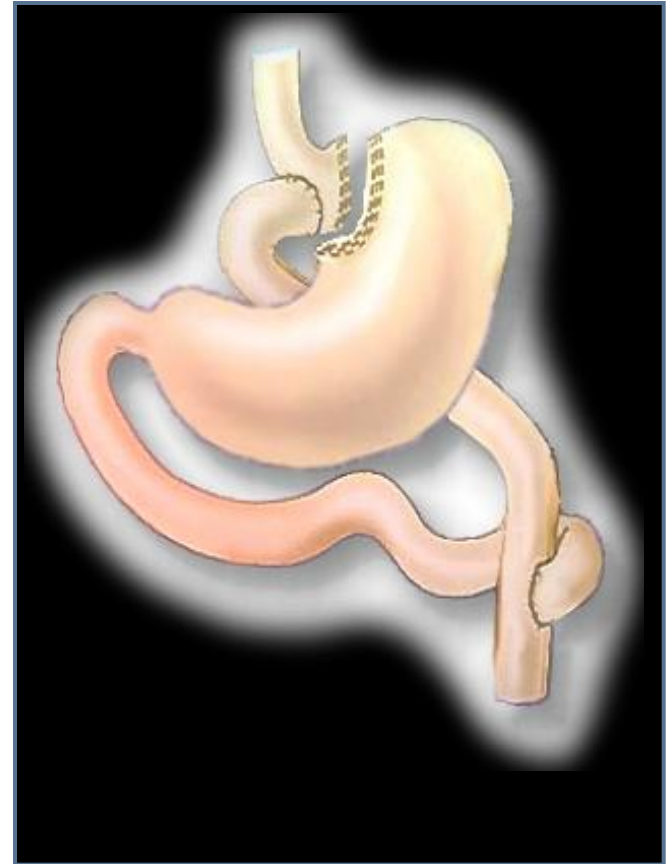
Gastric Band

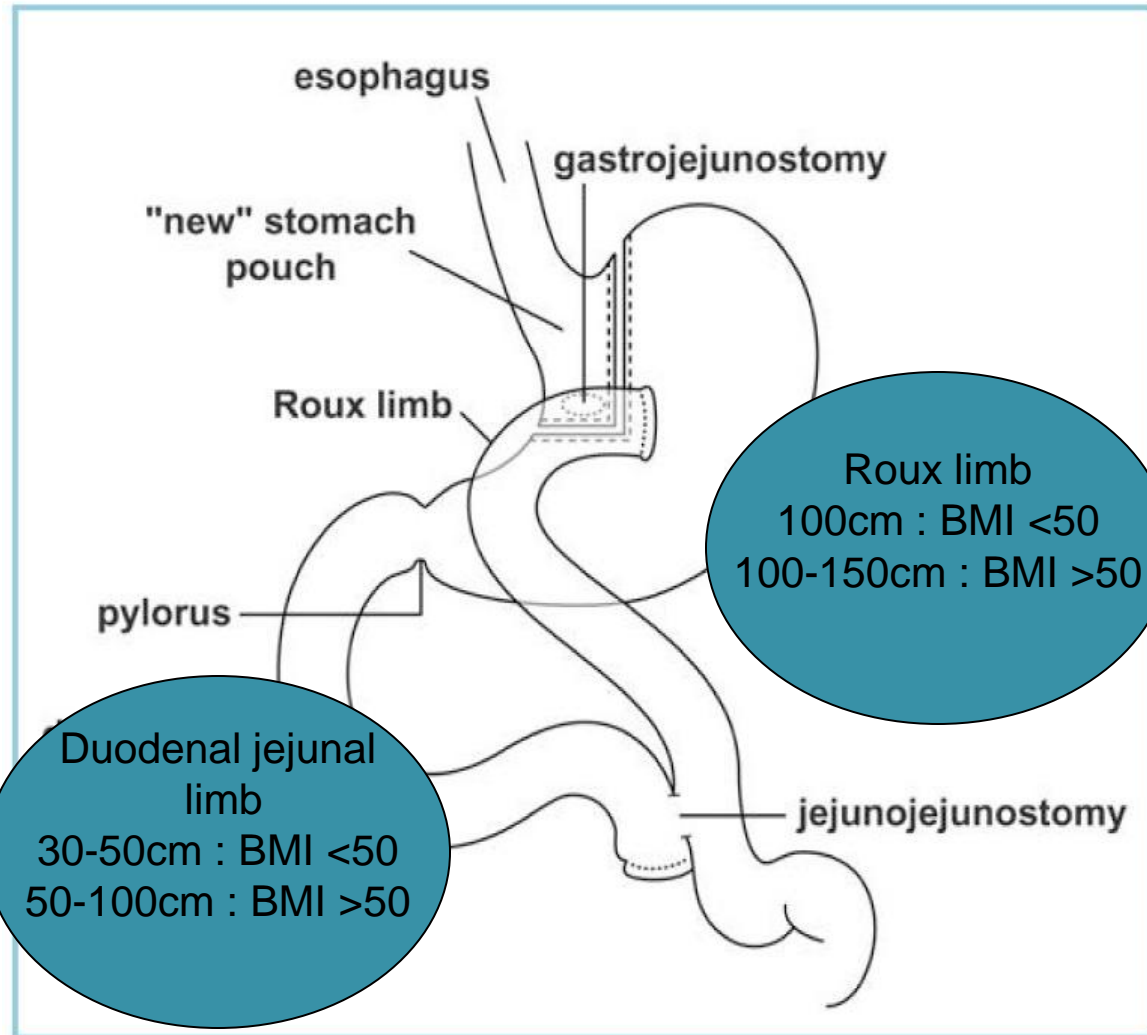


Gastric Sleeve

# Gastric-Bypass

- Long-term sustained weight loss
- No protein-calorie malabsorption
- Little vitamin or mineral deficiencies
- Technically difficult procedure





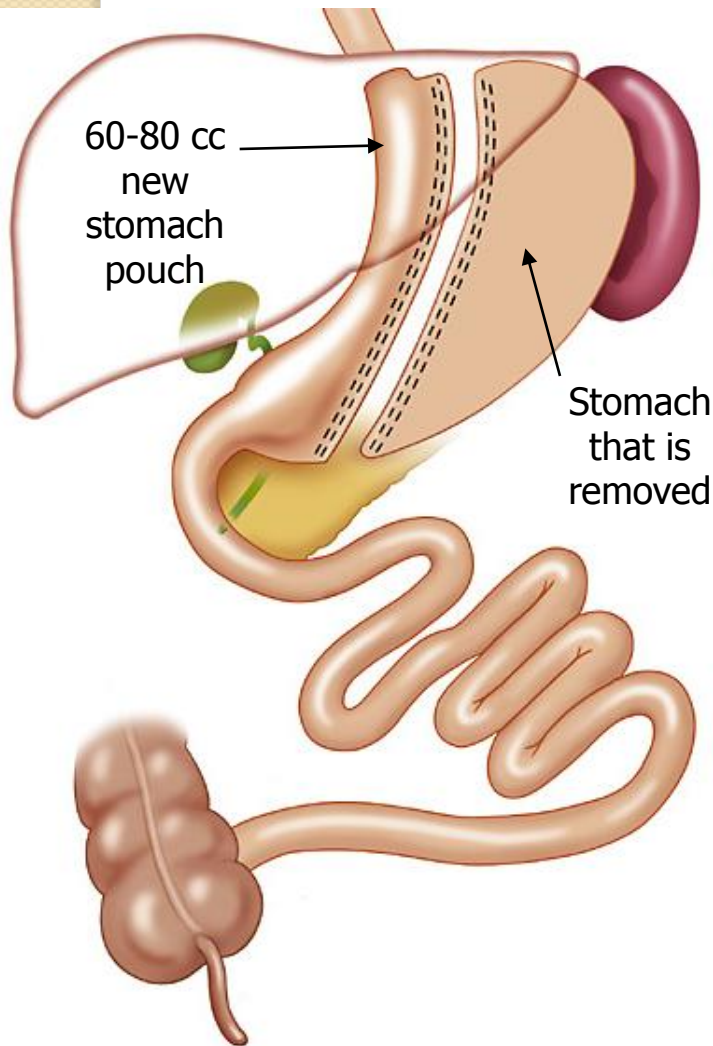
## Gastric Bypass Procedure

# Gastric Band

- Relatively easy surgical procedure
- Less dietary deficiencies
- Significant dietary compliance
- Less weight loss
- Less effective with sweet eaters



# Gastric Sleeve



- Emerging Procedure - Trend shifting towards Gastric Sleeve
- Vertical Pouch made
- Less Complications
- Relief from Diabetes in ~ 80 %
- No risk of vitamin or protein deficiency
- Maintains natural passage of food

	Gastric Bypass	Gastric Sleeve
Principle	Primarily malabsorption	Primarily Restrictive
Access to endoscopy	No	Yes
Procedure	Complex	Relatively easier than GBP No anastomosis
Weight loss	Generally more predictable and consistent loss of around 70% excess weight	Wide variation in weight loss (50-80% excess weight) The EWL at 3 years similar to that after RYGB*
Complication Rate	High upto 28%#	Low 0.1-7.4 %
Resolution of comorbidities	LSG rates are comparable with GBP	
Deficiency	Vit B12, Ca, iron	Nil

\* Gumbs et al., 2007; Baltasar et al., 2005; Lee et al., 2007

# Lee CM et al. Surg Endoscopy 2007

# Complications of Bariatric Surgery

- Bariatric surgery patients have little physiologic reserve
- Complications do not manifest in the same manner as normal-sized patients
- Key to good bariatric surgical outcomes is having a high index of suspicion

# Specific complications

- Leaks from anastomoses or staple lines are the most feared complications. the most common source for leaks is the gastrojejunostomy,
- Pulmonary embolus
- Deep venous thrombosis
- Bowel obstruction
- Internal hernias
- Inadequate weight loss
- Fascial dehiscence, hernia formation, and wound infection
- Marginal ulceration
- Staple line disruption



# Multidisciplinary Approach

**Bariatric Surgery**

**Nutrition and Dietary Care**

**Anesthesiology**

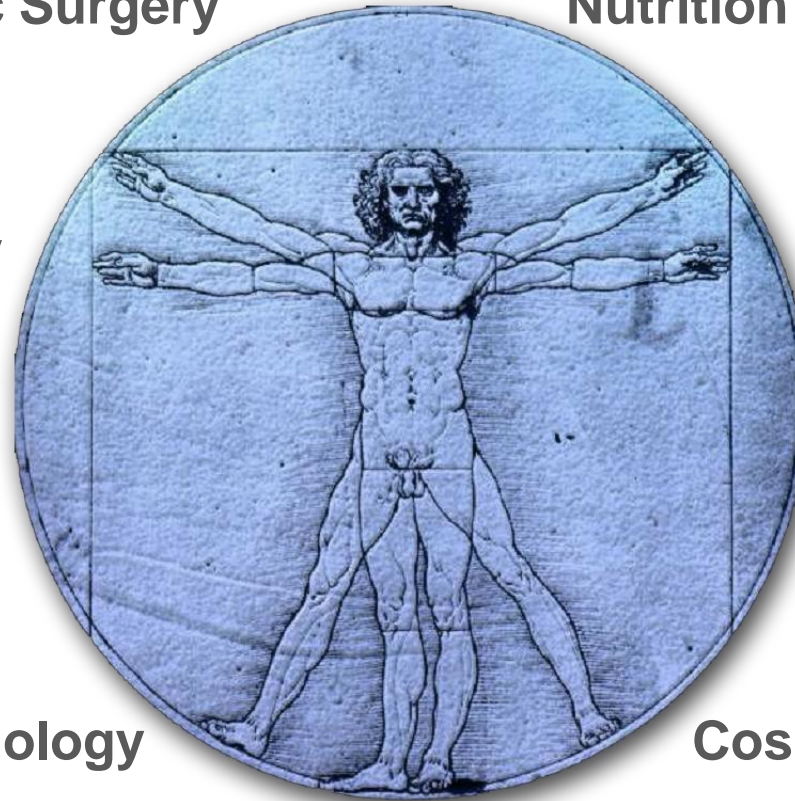
**Psychology**

**Pulmonology**

**Internal Medicine**

**Cardiology**

**Cosmetic Surgery**



**Multidisciplinary Approach**