

OBESITY

Definition

Obesity is a medical condition in which excess body fat accumulates to a level that increases the risk of health problems.

It is commonly defined using Body Mass Index (BMI):

- $\text{BMI} \geq 30 \text{ kg/m}^2 \rightarrow \text{Obesity}$
- $\text{BMI } 25\text{--}29.9 \text{ kg/m}^2 \rightarrow \text{Overweight}$

Clinical Features

- Increased body fat, especially around the abdomen
- Waist circumference:
 - 102 cm (men)
 - 88 cm (women)
- Elevated blood pressure
- Signs of insulin resistance
- Reduced physical stamina
- Joint strain or abnormal posture
- Breathing difficulty on exertion

Symptoms

- Easy fatigue
- Shortness of breath
- Excessive sweating
- Joint or back pain
- Difficulty sleeping or snoring (sleep apnea)
- Reduced physical endurance
- Menstrual irregularities (in some individuals)
- Low energy levels

How to prevent

Obesity is largely preventable through long-term healthy habits:

- Balanced diet from childhood onward

- Regular physical activity
- Limiting sugary drinks and ultra-processed foods
- Adequate sleep
- Managing stress
- Encouraging active daily routines (walking, sports, play)

Lifestyle Changes (First-line Management)

Dietary Changes

- Eat more:
 - Fruits and vegetables
 - Whole grains
 - Lean proteins
- Reduce:
 - Sugary foods and drinks
 - Fried and processed foods
- Practice portion control
- Maintain regular meal times

Physical Activity

- At least 150 minutes/week of moderate exercise (e.g., brisk walking)
- Strength training 2–3 times per week
- Reduce sedentary time (screen time)

Behavioral Changes

- Set realistic goals
- Keep food and activity records
- Build consistent routines
- Family and social support
- Professional counseling if needed

Surgical Management

Surgery is considered only for severe obesity when lifestyle changes alone are not effective.

Indications

- BMI $\geq 40 \text{ kg/m}^2$
- BMI $\geq 35 \text{ kg/m}^2$ with obesity-related diseases (e.g., diabetes, hypertension)

Common Types of Bariatric Surgery (MIS: Minimal Invasive surgery)

- Robotic/Laparoscopic Gastric bypass –
- Robotic/Laparoscopic Sleeve Gastrectomy –
- Adjustable gastric banding
- Endoscopic Balloon procedure

Benefits of surgery:

- Significant weight loss
- Improvement or resolution of diabetes and hypertension
- Better quality of life.

Advantages of Robotic Bariatric Surgery

1. Greater Surgical Precision
 - Robotic instruments provide high dexterity and fine movements
 - Allows accurate suturing and dissection
2. 3D High-Definition Visualization
 - Surgeon gets a magnified, three-dimensional view of the operative field
 - Improves identification of anatomical structures
3. Better Ergonomics for the Surgeon
 - Reduced surgeon fatigue
 - Improved control during long and complex bariatric procedures
4. Improved Access in Obese Patients
 - Easier handling of thick abdominal walls and deep operative fields
 - Especially useful in patients with severe obesity
5. Reduced Blood Loss
 - Precise movements help minimize tissue trauma
 - Leads to less intraoperative bleeding
6. Lower Risk of Complications
 - Reduced chances of anastomotic leak and injury to surrounding organs
 - Better consistency in complex steps
7. Smaller Incisions
 - Similar to minimally invasive laparoscopic surgery
 - Less postoperative pain and better cosmetic results

8. Faster Recovery
 - Shorter hospital stay
 - Earlier return to normal activities
9. Enhanced Outcomes in Complex Cases
 - Beneficial for revisional bariatric surgery
 - Useful in patients with previous abdominal surgeries

