

## 11. Obesity & Weight Management

### 11.1 Overview

Obesity is a complex chronic disease characterized by excessive body fat accumulation that increases the risk of multiple health conditions, including **heart disease, diabetes, and certain cancers**. The World Health Organization (WHO) defines obesity as a Body Mass Index (BMI)  $\geq 30 \text{ kg/m}^2$  and overweight as BMI  $\geq 25 \text{ kg/m}^2$ .

Globally, obesity rates have nearly tripled since 1975. As of 2022, over 1 billion people—650 million adults, 340 million adolescents, and 39 million children—were obese. (WHO Obesity and Overweight, 2023)

### 11.2 Causes / Risk Factors

Obesity results from an energy imbalance between calories consumed and expended, compounded by biological, behavioral, and environmental factors:

- **Dietary patterns:** High intake of calorie-dense foods, refined carbohydrates, and sugary drinks.
- **Sedentary lifestyle:** Limited physical activity due to desk jobs and urbanization.
- **Genetic predisposition:** Certain genes influence fat storage and appetite regulation.
- **Sleep deprivation:** Disrupts hormonal balance (ghrelin, leptin).
- **Socioeconomic and psychological factors:** Stress, emotional eating, and lack of awareness.

### 11.3 Symptoms / Indicators

Early indicators include gradual weight gain, fatigue, shortness of breath, and joint pain. Obesity is clinically assessed using:

- **BMI and waist circumference** ( $\geq 102 \text{ cm}$  in men,  $\geq 88 \text{ cm}$  in women indicate central obesity).
- Body composition analysis for fat percentage.
- Comorbidities such as hypertension, insulin resistance, dyslipidemia, and sleep apnea.

### 11.4 Prevention / Lifestyle

Preventive strategies include:

- **Balanced diet:** Emphasize fruits, vegetables, whole grains, lean proteins, and limit processed foods.
- **Physical activity:** At least **150 minutes/week** of moderate or 75 minutes/week of vigorous activity (WHO).
- **Behavioral modification:** Track meals, manage stress, and improve sleep patterns.

### 11.5 Management / Public Health Perspective

Public health strategies target both prevention and treatment:

- The WHO Global Action Plan on NCDs (2013–2030) aims to halt the rise of obesity.
- Fiscal policies like taxing sugary beverages have shown positive impact in several countries. Obesity requires long-term behavior change, community education, and integrated health system support.

### **Summary Points**

- Obesity is preventable through healthy diet and active lifestyle.
- It increases risk for diabetes, heart disease, and cancers.
- Regular screening and public health initiatives are essential for control.