



## **Obesity: The Real Global Epidemic**

#### So What is Overweight and Obesity?

Overweight is a condition characterized by excessive fat accumulation. Obesity, however, is a chronic and complex disease defined by excessive fat deposits that can significantly impact health. Obesity is more than just a weight issue it's a complex, chronic disease that has reached epidemic proportions worldwide.

#### **Understanding the Science of Obesity**

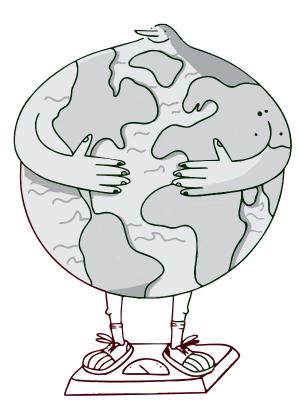
Obesity results from an energy imbalance when calorie intake consistently exceeds energy expenditure. This imbalance is influenced by multiple factors, including:

- Genetics: A family history of obesity increases susceptibility
- Metabolism: Metabolism in obesity refers to how the body processes energy and burns calories, which can be different from individuals with a healthy weight.
   Metabolism involves a complex interplay of biochemical processes that convert food into energy
- · Lifestyle: Sedentary habits and high-calorie diets contribute significantly
- Hormonal Factors: Conditions like hypothyroidism and polycystic ovary syndrome (PCOS) can lead to weight gain
- Medications: Certain antidepressants, corticosteroids, and antipsychotics can promote weight gain

#### The Health Hazards of Obesity

Carrying excess weight isn't just about aesthetics it's a major risk factor for chronic illnesses, including:

- Cardiovascular Disease: Hypertension, heart attacks and strokes
- Type 2 Diabetes: Insulin resistance leading to chronic high blood sugar
- · Cancer: Increased risk for multiple types, including breast and colorectal cancer
- Respiratory & Sleep Disorders: Obstructive sleep apnea and breathing difficulties
- Musculoskeletal Issues: Osteoarthritis and joint pain from excess weight
- Mental Health Impact: Depression, anxiety, and weight-related stigma



# Did you know?

To lose 1 kg of body weight, you need to create a calorie deficit of approximately 7,700 calories.

### Am I Obese?

Obesity is more than just a number on the scale, it involves assessing body fat, distribution, and overall health risks.

**Body Mass Index:** It is defined as a person's weight in kilograms divided by the square of their height in meters. Limitations: BMI does not distinguish between fat and muscle. A muscular athlete could have a high BMI despite having low body fat

- Waist Circumference (WC): High-risk obesity is defined as 40 inches for men and 35 inches for women A higher waist circumference indicates more visceral fat the dangerous fat stored around internal organs, which increases the risk of chronic diseases
- Waist-to-Hip Ratio (WHR): Helps determine fat distribution (apple-shaped bodies have higher health risks)
- Body Fat Percentage (BFP): Provides a more accurate measure of fat vs. muscle
- Bioelectrical Impedance Analysis (BIA): Uses electrical currents to estimate body fat percentage
- Dual-Energy X-ray Absorptiometry (DEXA): DEXA is considered the gold standard for body composition analysis. It provides detailed insights into: Total body fat percentage, Fat distribution (visceral vs. subcutaneous fat), Muscle mass, Bone density (important for assessing osteoporosis risk)



For adults vary widely based on factors like age, gender, activity level, and personal weight goals. Here's a general guideline:

- Women: Typically need about 1,800 to 2,200 calories per day
- Men: Usually require around 2,200 to 3,000 calories per day

For weight loss, reducing your daily intake by about 500-750 calories can promote gradual, sustainable fat loss (roughly 0.5-1 kg per week). These numbers are estimates, so for personalized advice, consulting a healthcare professional or registered dietitian is recommended.

#### Did you Know Why Losing Weight is Easy at First but Gets Harder Later

Many people experience rapid weight loss in the initial stages of a diet or exercise regimen, only to find that progress slows down or even stalls after a few weeks.

#### **Phase 1: Rapid Weight Loss Due to Water Loss**

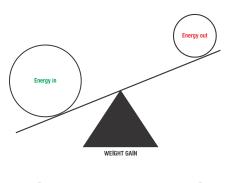
Carbohydrate Storage and Water Retention: The body stores carbohydrates in the form of
glycogen in the liver and muscles. Each gram of glycogen binds with 3-4 grams of water.
When you cut carbs, glycogen stores deplete, and the body releases water, leading to rapid
initial weight loss. Many diets, especially whole-food and low-carb diets, naturally reduce
sodium intake. Lower sodium levels lead to less water retention, further accelerating early
weight loss

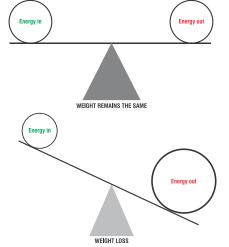
#### Phase 2: Slower Weight Loss as Fat Becomes the Primary Focus

After the initial water weight loss, the body transitions into burning more fat. However, Fat Loss Takes More Time

- Metabolic Adaptation (Slower Metabolism). As body weight decreases, the body requires fewer
  calories to function. The metabolism slows down as a survival mechanism, making it harder to
  continue losing weight at the same pace
- Hormonal Changes. As fat stores decrease, levels of leptin (the hormone that regulates hunger and energy balance) drop. Lower leptin levels can increase appetite and cravings, making it harder to maintain a calorie deficit. The body also increases ghrelin, the hunger hormone, which makes sustaining weight loss even more challenging
- Loss of Muscle Mass. Since Muscle burns more calories than fat, losing muscle can further slow metabolism. Body's Set Point Theory: The body has a natural weight range it tries to maintain, known as the set point. As you lose weight, your body may try to resist further loss by slowing metabolism and increasing hunger signals







## **Medical & Surgical Interventions for Obesity**

When lifestyle changes alone are insufficient, medical therapies or surgical options may be necessary.

#### **FDA-Approved Medications**

Prescription medications can aid weight loss by reducing appetite, increasing metabolism, or preventing fat absorption. Some of the most effective options include:

- **GLP-1 Receptor Agonists:** Semaglutide, Liraglutide, and Tirzepatide help regulate appetite and glucose levels
- Appetite Suppressants: These act on the brain to reduce cravings and food intake
- Fat Absorption Blockers: These medications prevent about 30% of dietary fat from being absorbed in the intestines
- Metformin: Is an FDA-approved medication primarily prescribed to manage blood sugar levels in individuals with type 2 diabetes. Emerging research suggests that it may also contribute to weight loss in some patients



For individuals with a BMI  $\geq$ 40 (or  $\geq$ 35 with comorbidities), weight-loss surgery may be an option. Common procedures include:

- Adjustable Gastric Banding: Limits food intake by placing a band around the stomach
- Endoscopic Sleeve Gastroplasty (ESG): A non-surgical option that reduces stomach size using sutures
- Sleeve Gastrectomy: Removes part of the stomach, decreasing appetite-regulating hormones
- Gastric Bypass: Reduces stomach size and alters nutrient absorption



Obesity is a growing global health challenge, but it's not inevitable. While genetics play a role, lifestyle choices remain the key to prevention and long-term weight management.

#### **Smart Nutrition for Weight Management**

A well-balanced diet is fundamental in preventing obesity. Here's how to optimize your nutrition for better health:

#### Choose Nutrient-Dense Foods

Prioritize whole, fiber-rich foods such as, Fresh fruits and vegetables, Whole grains (brown rice, quinoa, whole wheat), Lean proteins (fish, chicken, tofu, legumes)

#### Reduce Processed & High-Calorie Foods

Limit foods high in sugar, unhealthy fats, and refined carbohydrates. Avoid, Sugary drinks (sodas, sweetened coffee, fruit juices with added sugar), Processed snacks (chips, cookies, fast food), Trans fats and fried foods

#### Control Portions & Practice Mindful Eating

Use smaller plates to help regulate portion sizes, Eat slowly and pay attention to hunger and fullness cues, Avoid distractions like TV or smartphones while eating

#### Increase Fiber Intake

Soluble fiber (found in oats, apples, flaxseeds) helps regulate blood sugar and keeps you full longer, Insoluble fiber (found in vegetables, nuts, whole grains) supports digestion

#### Stav Hvdrated

Drinking 8-12 glasses of water daily can help curb hunger and support metabolism. Herbal teas and infused water are great alternatives to sugary beverages

#### Prioritize Protein for Satiety & Muscle Maintenance

Include lean protein sources such as, Eggs, salmon, Greek yogurt, and cottage cheese, Plant-based options like lentils, beans, and quinoa

#### Cook Smarter

Choose healthier cooking methods such as, Baking, grilling, steaming, and air-frying instead of deep-frying, Using herbs and spices for flavor instead of excessive salt or sugar









#### Move More to Keep Fat at Bay

A small commitment to movement can yield significant health benefits. Adults (18-65) and seniors (65+) should aim for:

At least 150 minutes of moderate-intensity exercise per week (e.g., brisk walking, cycling, swimming), OR at least 75 minutes of high-intensity exercise per week (e.g., running, HIIT workouts), 8,000 to 10,000 steps per day as a general movement goal.

#### **Simple Ways to Stay Active**

- Take the stairs instead of the elevator
- · Walk or bike instead of driving short distances
- Incorporate strength training to maintain muscle mass and boost metabolism
- Stretch and move throughout the day, especially if working a sedentary job

#### A Holistic Approach to Obesity Prevention

Beyond diet and exercise, sleep, stress management, and behavioral habits play a crucial role in weight maintenance. Prioritizing quality sleep (7-9 hours per night) and reducing stress through mindfulness, meditation, or hobbies can prevent emotional eating and promote a healthier lifestyle.

By making small, sustainable changes, individuals can take control of their health and prevent obesity before it starts. The key is consistency not perfection. A proactive, balanced approach ensures long-term well-being and a healthier future.



### A Call to Action for a Healthier Future

**World Obesity Day (March 4)** is a crucial reminder that obesity is a complex global health challenge one that demands collective action rather than just individual effort. It's not merely about diet and exercise; it's about fostering environments that enable healthier choices, addressing social and economic barriers, and promoting education on nutrition and overall well-being.

Small yet meaningful steps such as prioritizing whole foods, embracing active lifestyles, and advocating for policies that support long-term health can drive significant progress. Obesity is both preventable and manageable, and by raising awareness and cultivating supportive environments, we can pave the way for a healthier future for all.

Beyond being a challenge, obesity presents an opportunity to take control of your health and reshape your lifestyle. Prevention is key, and through balanced nutrition, regular physical activity, and mindful lifestyle choices, individuals can significantly reduce the risk of obesity-related complications. Increasing awareness about healthy eating habits, portion control, and the importance of movement is essential in stopping obesity before it starts.

Empowering yourself with knowledge and seeking professional guidance allows you to make informed, sustainable health decisions. Remember, every small change from choosing nutrient-dense foods to incorporating daily exercise contributes to a healthier, more vibrant life. By prioritizing prevention and raising awareness, you not only transform your own well-being but also inspire your community to embrace a culture of health and wellness.







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