BODY MASS INDEX

Classification (kg/m²):  
NORMAL WEIGHT  18.5-24.9  
OVERWEIGHT  25.0-29.9  
CLASS I OBESITY  30.0-34.9  
CLASS II OBESITY  35.0-39.9  
CLASS III OBESITY >40

Percentage body fat is measured by taking the total mass of fat divided by the total body mass. There are a number of measurement techniques, including biopiempence and DXA scans.

Advantages  
• Increased BMI generally correlates with metabolic and fat mass diseases in population studies  
• Commonly used  
• Reasonably reproducible  
• Low cost  
• Adequate measure for epidemiological studies  
• Adequate screening metric for most patients

Disadvantages  
• May not correlate with metabolic and fat mass diseases in an individual patient  
• Does not account for muscle mass  
• BMI cut-off points do not distinguish between men and women, nor ethnic and racial considerations  
• Should be used as part of the clinical evaluation and not as the sole measure of obesity for all patients

Percent body fat may be useful in patients with extremes in muscle mass (e.g., individuals with sarcopenia or substantial increases in muscle mass), and thus may be a more accurate measure of body composition when assessing the efficacy of interventions directed toward change in muscle mass.

Waist circumference is measured at the abdomen, usually at the smallest circumference of the natural waist, just above the belly button.

Advantages  
• Well correlated to metabolic disease  
• Direct anatomical measure of adipose tissue deposition, with an increase in waist circumference reflective of adipose tissue dysfunction  
• Low cost  
• Racial/ethnic differences

Disadvantages  
• Measurement not always reproducible  
• Not clear that waist circumference is clinically superior to BMI in correlating to metabolic disease, especially at BMI >35 kg/m²

WHICH METHOD IS THE “BEST” MEASURE OF OBESITY?

POPPULATION ASSESSMENT  
• Body mass index (BMI), percent body fat, and waist circumference similarly correlate with prevalence of metabolic syndrome

INDIVIDUAL ASSESSMENT  
• BMI is a reasonable initial screening measurement for most patients  
• Percent body fat may be useful in patients with extremes in muscle mass (e.g., individuals with sarcopenia or substantial increases in muscle mass), and thus may be a more accurate measure of body composition when assessing the efficacy of interventions directed toward metabolic disease among individuals with BMI >35 kg/m²

CLASSIFICATION (kg/m²):  
ESSENTIAL FAT  2-5%  
ATHLETES  6-13%  
FITNESS  14-17%  
ACCEPTABLE  18-24%  
OBESITY  ≥25%

References: [1] [2] [3] [6] [8]

The Obesity Medicine Association's Guide to Obesity Classification

For more educational resources about obesity, visit obesitymedicine.org