

# Screening Criteria for Metabolic Syndrome (MetS)

**MetS is present when a person has three or more of the following:**

- Abdominal obesity (waist circumference of greater than 40 inches in men, and greater than 35 inches in women); visually having an apple-shaped figure.
- Triglyceride level of 150 milligrams per deciliter of blood (mg/dL) or greater, or being on medication to control triglycerides.
  - NOTE: Optimal functional value is 50–150 mg/dL.
- High-density lipoprotein cholesterol of less than 40 mg/dL in men or less than 50 mg/dL in women.
  - NOTE: Optimal functional value is greater than or equal to 45 and less than or equal to 75 for men, and greater than or equal to 55 and less than or equal to 85 for women.
- Systolic blood pressure (top number) of 130 millimeters of mercury (mm Hg) or greater, or diastolic blood pressure (bottom number) of 85 mm Hg or greater, or being on medication to treat high blood pressure. If only one of the two numbers is high, you are still at risk of MetS.
- Fasting glucose of 100 mg/dL or greater or being treated for diabetes with medication.
  - NOTE: As per the Centers for Disease Control and Prevention criteria, a fasting blood sugar level of 100–125 mg/dL is considered pre-diabetes. A fasting blood sugar level greater than 126 mg/dL is considered diabetes.
  - 85% of all people with type 2 diabetes also have MetS (very strong correlation).
  - NOTE: Optimal functional value of fasting glucose is 70–90 mg/dL.

The risk for heart disease, diabetes, and stroke increases with the number of MetS risk factors a person has. The risk of MetS is linked to overweight, obesity, lack of physical activity, and increased inflammation.

## How to Measure Waist Circumference

Here are instructions on how to most accurately measure waist circumference. See the diagram comparing waist circumference to body mass index and waist-to-hip ratio.

- Measure the waist 4 cm above the umbilicus or visually at the most narrow point at the sides of the trunk when facing the individual.
- Make sure the tape is parallel to the ground around the waist.
- Keep the tape snug, but do not compress the skin.
- Measure just after exhaling.

## Body Mass Index



### BMI Categories

- Underweight – <18.5
- Normal weight – 18.5 - 24.9
- Overweight – 25 - 29.9
- Obese – 30 or greater

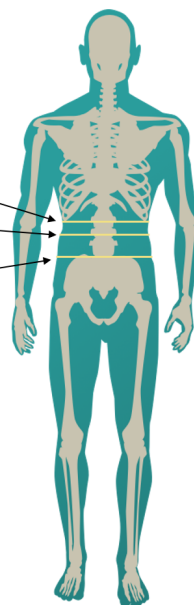
### Waist circumference

Just below the bottom rib

Narrowest part of midriff

Waist circumference can be measured in several places. Many researchers favor using the top of the hip bone as a landmark, so the tape measure goes over the navel.

**Waist circumference associated with increased health risks:**  
For men: more than 40 inches (102cm)  
For women: more than 35 inches (88cm)



### Waist-to-hip ratio

Hips are usually measured at the widest circumference, around the buttocks

**Waist-to-hip ratio associated with increased health risks:**  
For men: 0.9 – 1.00  
For women: .85

