

# Metabolic Syndrome

## What is Metabolic Syndrome?

Metabolic syndrome is not a disease, but rather a group of disorders, including:

- High blood pressure
- High insulin levels
- Excess body weight
- Abnormal cholesterol levels (low HDL “good” cholesterol and high triglycerides)
- Central obesity

Each of these disorders is by itself a risk factor for other diseases. However, having a combination of these disorders dramatically boosts the chances of developing potentially life-threatening illnesses, such as diabetes, heart disease or stroke. The risk to health also rises with an increasing number of components present.

Having at least one feature of metabolic syndrome, such as high blood pressure, high cholesterol or an apple-shaped body, may indicate the existence of the condition. Committing to a lifestyle change that includes healthy eating and physical activity can delay the development of future illness.



### Other Names for Metabolic Syndrome:

- Syndrome X
- The deadly quartet
- Insulin resistance syndrome

# Risk Factors for Metabolic Syndrome:

## Age

- The prevalence of metabolic syndrome increases with age, affecting less than 10% of people in their 20s and 40% of people in their 60s.

## Race

- Metabolic syndrome is generally more common among blacks and Mexican Americans than among caucasians.

## Obesity

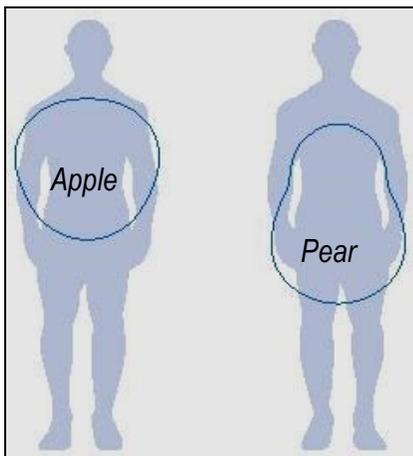
- A body mass index (BMI) greater than 25 increases the risk of developing metabolic syndrome. BMI is a measure of body size based on an individual's height and weight.
  - BMI less than 18.5=underweight
  - BMI 18.5 to 24.9=healthy weight
  - BMI 25 to 29.9=overweight
  - BMI 30 or higher=obese
- Abdominal obesity also increases the risk.

## History of Diabetes

- Having a family history of type 2 diabetes or diabetes during pregnancy (gestational diabetes) increase the risk for developing metabolic syndrome.

## Other diseases

- A diagnosis of hypertension, cardiovascular disease (CVD) or polycystic ovary syndrome (a hormonal disorder in which a woman's body produces an excess of male hormones) also increases the risk for metabolic syndrome.



**Abdominal obesity** refers to the presence of excess fat in the abdominal area. Those who are "apple-shaped" tend to store extra body fat around their stomach area. Abdominal obesity is often referred to as "belly fat." People who are "apple shaped" are more at risk for conditions like heart disease and diabetes than "pear-shaped" — those carrying weight more in the hips, buttocks and thighs.

For women, a waist size of more than 35 inches means generally too much abdominal fat. For men, a waist size of more than 40 inches is considered too high.

# Diagnosing Metabolic Syndrome

According to the National Cholesterol Education Program (NCEP), you have metabolic syndrome if you have 3 or more of the following:

- **Waist circumference**
  - ✓ Greater than 35 inches in women and 40 inches in men (Abdominal obesity)
- **Triglycerides**
  - ✓ Levels of 150 milligrams per deciliter (mg/dl) or higher
- **Blood pressure**
  - ✓ 130/85 mm Hg or higher
- **Fasting Blood Glucose**
  - ✓ Level of 110 mg/dl or higher
- **High-density lipoprotein (HDL) cholesterol**
  - ✓ Lower than 50 mg/dl in women and 40 mg/dl in men



# Prevention of Metabolic Syndrome

If you have only one or two components of metabolic syndrome-or better yet, none at all, then you can make the following lifestyle changes now to prevent the onset of the syndrome.



## Commit to a healthy life

- This includes eating plenty of fruits and vegetables, choosing lean cuts of white meat and fish over red meat, avoiding processed or deep-fried dinners, and eliminating table salt by experimenting with other herbs and spices.



## Get moving

- It is important to stay active. We should get at least 30 minutes of moderately strenuous activity on most days of the week.



## Schedule regular check-ups

- It is important to schedule regular check-ups on blood pressure, cholesterol and blood sugar levels. Early detection of problems can allow you to make additional lifestyle modifications early on.

# *Treating Metabolic Syndrome*

The primary goal of treatment is to prevent developing future health complications including Type 2 diabetes, heart attack, or stroke.

To achieve this goal, the preferred method is an aggressive regimen of self-care strategies focusing on diet and exercise. Lifestyle changes may include losing between 7 and 10 percent of current body weight and getting at least 30 minutes of moderate to intense exercise five to seven days a week. Quitting smoking is another way to help prevent future health problems.

The following are routinely monitored to ensure that lifestyle modifications are working:

- ✓ Weight
- ✓ Blood sugar
- ✓ Cholesterol
- ✓ Blood pressure

In addition to diet and exercise, it may sometimes be necessary to prescribe medications to help manage metabolic syndrome risk factors.

These include:

- ❖ Weight loss medications
- ❖ Insulin sensitizing medications
- ❖ Aspirin
- ❖ Blood pressure lowering medications
- ❖ Cholesterol lowering medications

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