

Metabolic Syndrome

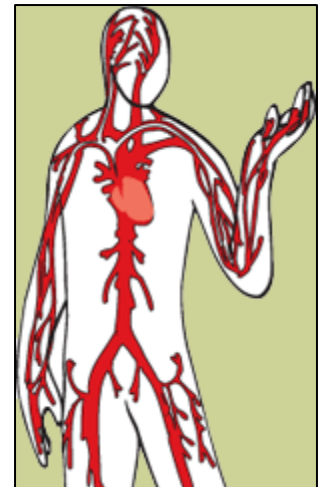
The metabolic syndrome is a clustering of conditions that can occur together in an individual. These conditions can increase the risk for heart disease, stroke and diabetes. A commitment to a lifestyle change can delay these conditions.

Overview

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

- High blood pressure
- High insulin levels
- Excess body weight
- Abnormal cholesterol levels

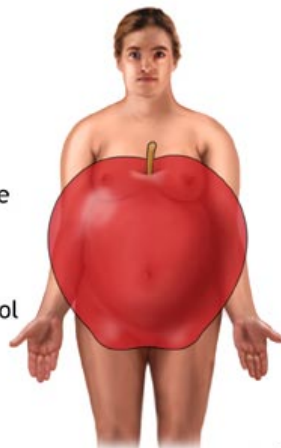
Each of these disorders is by itself a risk factor for other diseases. In combination, however, these disorders dramatically boost the chances of developing potentially life-threatening illnesses, such as diabetes, heart disease or stroke.



Conditions associated with the Metabolic Syndrome:

Metabolic syndrome
(Syndrome X)

- Central obesity
- High blood pressure
- High triglycerides
- Low HDL-cholesterol
- Insulin resistance



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The risk to your health increases with an increasing number of components you have.

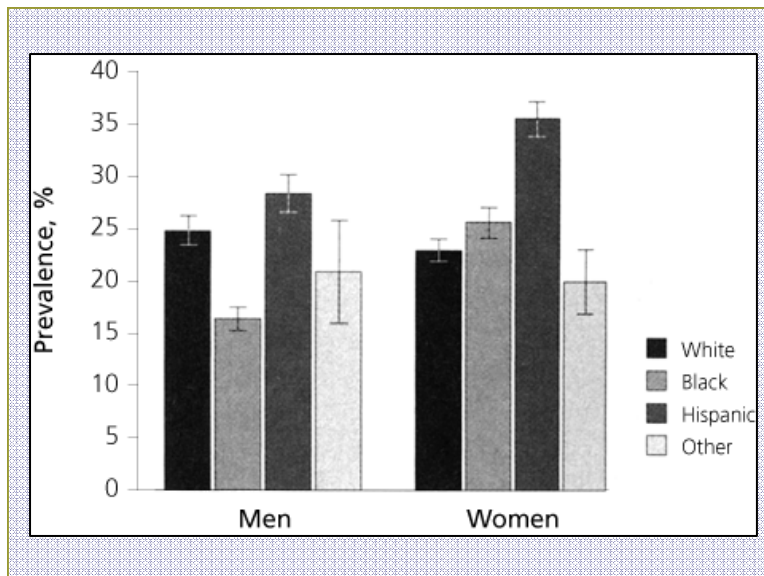
The syndrome is closely related to a generalized metabolic disorder called insulin resistance, in which the body can't use insulin efficiently.

Metabolic syndrome has been called by many names, including:

- Syndrome X
- The deadly quartet
- Insulin Resistance Syndrome

Prevalence

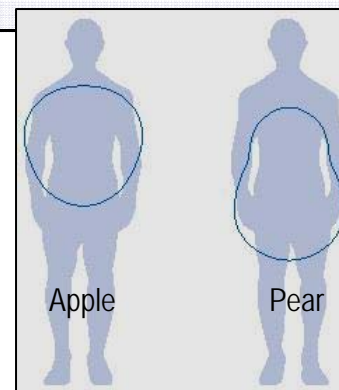
- Metabolic syndrome affects as many as one in four American adults (25%)
- For adults over the age of 40, this percentage jumps to 40%
- There has been an increase in metabolic syndrome prevalence by 61% over the past decade
- Rates differ among races and gender



Risk Factors

Age	<ul style="list-style-type: none"> ◆ 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	<ul style="list-style-type: none"> ◆ Metabolic syndrome is generally more common among blacks and Mexican Americans than among Caucasians.
Obesity	<ul style="list-style-type: none"> ◆ A body mass index (BMI) greater than 25 increases the risk of developing metabolic syndrome. ◆ Abdominal obesity does as well. Abdominal obesity refers to having an apple shape rather than a pear.
History of Diabetes	<ul style="list-style-type: none"> ◆ Having a family history of type 2 diabetes or diabetes during pregnancy (gestational diabetes) increase the risk for developing metabolic syndrome.
Other diseases	<ul style="list-style-type: none"> ◆ 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.

Having at least one feature of metabolic syndrome, such as high blood pressure, high cholesterol or an apple-shaped body, may indicate the presence of the condition. It is important to talk with a physician about testing for other components of the syndrome and developing a plan to avoid the development of serious diseases.



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 cholesterol**
Lower than 50 mg/dl in women and 40 mg/dl in men



Prevention

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.



Treatment

The primary goal of treatment is to prevent:

- Type 2 diabetes
- Heart attack
- Stroke

The primary goal of therapy is to prevent the development of insulin resistance. To achieve this goal, the preferred method is an aggressive regimen of self-care strategies focusing on diet and exercise. The following are routinely monitored to ensure that lifestyle modifications are working:

- Weight
- Blood glucose
- Cholesterol
- Blood pressure

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<http://www.mayoclinic.com>
<http://americanheart.org>

There are medications to control the syndrome that include:

Weight loss drugs	Along with diet and exercise, it may sometimes be necessary to prescribe weight loss drugs at times.
Insulin sensitizers	Drugs prescribed to diabetics to help decrease insulin resistance may be helpful.
Aspirin	Prescribed to reduce the risk of heart attack.
Medications to lower blood pressure	Diuretics, angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers and beta blockers all work to lower blood pressure.
Medications to regulate cholesterol	Medications such as niacin, statins and fibrates can help improve cholesterol in several different ways.

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