



The Metabolic Syndrome

WHAT IS THE METABOLIC SYNDROME?

The term metabolic syndrome describes a cluster of risk factors that increase the chances of developing heart disease, stroke, and diabetes (high blood glucose, also called high blood sugar). The exact cause of the metabolic syndrome is not known but genetic factors, too much body fat (especially in the waist area, the most dangerous type of fat), and lack of exercise add to the development of the condition.

You are diagnosed with the metabolic syndrome if you have three or more risk factors (see table below).

Metabolic Risk Factors	Measurement
Large amount of abdominal body fat	Waist measurement of more than 40 inches (101 cm) in men; more than 35 inches (89 cm) in women*
Low HDL ("good") cholesterol	Less than 40 mg/dl in men; less than 50 mg/dl in women, or currently on medication to increase HDL
High triglycerides (levels of fat in the blood)	150 mg/dl or higher, or currently on medication to lower triglycerides
High blood pressure	135/85 mmHg or higher, or currently on medication to reduce blood pressure
High blood glucose	Fasting glucose of 100 mg/dl or higher, or currently on medication to lower glucose levels

* 90–94 cm in men and 80 cm in women outside the U.S.

Having three or more risk factors is a sign that the body is resistant to insulin, an important hormone produced by the pancreas. This resistance to insulin means that more insulin than normal is needed to keep the body working.

DID YOU KNOW?

One in five Americans has the metabolic syndrome.

WHO IS AT RISK FOR THE METABOLIC SYNDROME?

The syndrome runs in families and is more common among African Americans, Hispanics, Asians, and Native Americans. For all people, the chances of developing the syndrome rises as people get older.

You might be at risk for the syndrome if you don't get much exercise and have

- Gained weight, especially around the waist
- A parent or sibling with diabetes
- High levels of fat or glucose in your blood
- High blood pressure

Most people who have the metabolic syndrome feel healthy and may not have any signs or symptoms, especially if they are not obese. However, they are at risk of developing life-threatening diseases like diabetes and heart disease in the future.

HOW IS THE METABOLIC SYNDROME TREATED?

Increasing physical activity and losing weight are the best ways to begin to manage your condition. Medications can also treat risk factors such as high blood pressure or high blood glucose.

If you think you have risk factors for the metabolic syndrome, talk with your doctor. Your doctor can run blood tests and measure your waist circumference to see if you have the metabolic syndrome, and determine the best treatment option for you.

Finding out if you have the metabolic syndrome can give you a peek into your future health and see if you are headed down the path to heart disease. It will also give you time to make important lifestyle changes before serious complications develop.

Questions to ask your doctor

- What can I do to overcome metabolic syndrome?
 - What are my options for treatment?
 - What are the advantages and disadvantages of each treatment option?
 - What's the best way to lose weight?
 - What kind of exercise is best for me?
 - Should I see an endocrinologist for my care?
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RESOURCES

- Find-an-Endocrinologist: www.hormone.org or call 1-800-HORMONE (1-800-467-6663)
- Hormone Health Network diabetes information: www.hormone.org/diabetes
- National Diabetes Information Clearinghouse (National Institutes of Health–NIH):
— diabetes.niddk.nih.gov/dm/pubs/insulinresistance
— diabetes.niddk.nih.gov/dm/pubs/stroke
- National Heart, Lung, and Blood Institute (NIH): www.nhlbi.nih.gov/health/health-topics/topics/ms
- Mayo Clinic: www.mayoclinic.com/health/metabolic%20syndrome/DS00522
- American Heart Association: www.americanheart.org and search for metabolic syndrome
- MedlinePlus (NIH): www.nlm.nih.gov/medlineplus/metabolicsyndrome.html

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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society (www.endo-society.org). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at www.hormone.org/Spanish.

The Metabolic Syndrome Fact Sheet



www.hormone.org