



Hormones & Your Heart

WHAT IS CARDIOMETABOLIC RISK?

The term cardiometabolic risk describes a person's chances of damaging their heart and blood vessels when one or more risk factors are present. Risk factors include

- Obesity
- High LDL ("bad") cholesterol
- High blood fat (triglycerides)
- Low HDL ("good") cholesterol
- High blood pressure
- Insulin resistance (when your body can't use insulin properly)

Each of these risk factors is dangerous on its own, but a combination greatly increases the risk of heart disease and stroke.

Metabolic syndrome, syndrome X, cardiometabolic syndrome, and insulin resistance syndrome are other terms for this cluster of risk factors.

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DID YOU KNOW?

Insulin resistance sometimes occurs in people who are not obese, and it increases their cardiometabolic risk just as it does in people who are overweight or obese.

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WHO IS AT RISK?

People who are overweight or obese have a greater risk of heart disease, stroke, and type 2 diabetes, mainly because weight affects how insulin works in the body.

Insulin, a hormone produced by the pancreas, helps manage the levels of blood glucose (sugar) and fats (cholesterol and triglycerides) in the blood. With weight gain, insulin can become less effective so that your body does not respond well to it. When your body is less sensitive to insulin, more glucose ends up in the blood. This condition is called insulin resistance and can lead to diabetes. Also, high blood pressure is more common in people with insulin resistance.

HOW DO YOU KNOW IF YOU ARE AT RISK FOR CARDIOMETABOLIC PROBLEMS?

People with cardiometabolic risk have several risk factors that come together. If they have one, they are likely to have others. It is the combination of the risk factors that determines if you have increased cardiometabolic risk.

HOW IS CARDIOMETABOLIC RISK TREATED?

The goal of treatment is to reach the recommended levels for each separate risk factor. Changes in diet, exercise, and lifestyle are the first steps toward weight loss in people who are obese. But if you have other medical problems, such as diabetes or heart disease, your doctor may recommend drug therapy to raise your good cholesterol and/or lower bad cholesterol, triglycerides, blood pressure, and blood glucose.

All treatment options have risks. Your doctor will work with you to find the best treatment option for you.

CARDIOMETABOLIC RISKS FACTORS

Danger Zones	Where You Want to Be
Obesity: Waist measurement greater than 40 inches in men; greater than 35 inches in women.	A body mass index (BMI) of 18.5 to 24.9 for normal weight. (BMI is calculated from your height and weight.)
High LDL ("bad") cholesterol: Greater than 100 mg/dl.	Less than 70 mg/dl.
Low HDL ("good") cholesterol: Less than 40 mg/dl in men; 50 mg/dl in women.	Greater than 40 mg/dl in men and 50 mg/dl in women.
High triglycerides (blood fat): Greater than 150 mg/dl.	Less than 150 mg/dl.
High blood pressure: Systolic 130 mmHg or greater; diastolic 85 mmHg or greater (130/85).	Recommended: Systolic less than 120 mmHg and diastolic less than 80 mmHg (120/80).
Fasting blood glucose: Greater than 100 mg/dl or already diagnosed type 2 diabetes.	Normal blood glucose after an 8-hour fast is 70 to 100 mg/dl.

RESOURCES

- Find-an-Endocrinologist: www.hormone.org or call 1-800-HORMONE (1-800-467-6663)
- Hormone Health Network:
 - www.hormone.org/Cardiovascular/upload/hormones-and-obesity-bilingual-042010.pdf
 - www.hormone.org/diabetes/index.cfm
 - www.hormone.org/Cardiovascular/hypertension.cfm
 - www.hormone.org/Other/upload/hyperlipidemia-bilingual-071009.pdf
- MedlinePlus (National Institutes of Health-NIH): www.nlm.nih.gov/medlineplus/metabolicsyndrome.html
- 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.heart.org (search for Metabolic Syndrome)

HOW CAN YOU LOWER YOUR RISK OF CARDIOVASCULAR PROBLEMS?

One of the best things you can do to lower your risk of cardiovascular risk is to adopt a healthy lifestyle. For example, lose weight if needed or avoid becoming overweight, exercise regularly, eat a healthy diet, stop smoking, and be moderate in your use of alcohol. Weight loss can have a dramatic effect on improving your health.

If you are overweight or obese or think you may have one or more of the risk factors described above, talk with your doctor. Medications that bring your risk factors under control can also lower your risk for heart disease and stroke.

Questions to ask your doctor

- Am I at risk for cardiometabolic problems?
- Which risk factors do I have?
- What can I do to lower my risk?
- What are my options for treatment?
- What are the risks and benefits of each of my options?
- Do I need medicines?

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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.

