

LIFESTYLE RISKS

High Blood Cholesterol: What You Need to Know

Why Is Cholesterol Important?

Your blood cholesterol level has a lot to do with your chances of getting heart disease. High blood cholesterol is one of the major risk factors for heart disease. A risk factor is a condition that increases your chance of getting a disease. In fact, the higher your blood cholesterol level, the greater your risk for developing heart disease or having a heart attack.

Heart disease is the number one killer of women and men in the United States. Each year, more than a million Americans have heart attacks, and about a half million people die from heart disease.

How Does Cholesterol Cause Heart Disease?

When there is too much cholesterol (a fat-like substance) in your blood, it builds up in the walls of your arteries. Over time, this buildup causes "hardening of the arteries" so that arteries become narrowed and blood flow to the heart is slowed down or blocked. The blood carries oxygen to the heart, and if enough blood and oxygen cannot reach your heart, you may suffer chest pain. If the blood supply to a portion of the heart is completely cut off by a blockage, the result is a heart attack.

High blood cholesterol itself does not cause symptoms; so many people are unaware that their cholesterol level is too high. It is important to find out what your cholesterol numbers are because lowering cholesterol levels that are too high lessens the risk for developing heart disease and reduces the chance of a heart attack or dying of heart disease, even if you already have it. Cholesterol lowering is important for everyone--younger, middle age, and older adults; women and men; and people with or without heart disease.

What Do Your Cholesterol Numbers Mean?

Everyone age 20 and older should have their cholesterol measured at least once every 5 years. It is best to have a blood test called a "lipoprotein profile" to find out your cholesterol numbers. This blood test is done after a 9- to 12-hour fast and gives information about your:

- **Total cholesterol**
- **LDL (bad) cholesterol**--the main source of cholesterol buildup and blockage in the arteries
- **HDL (good) cholesterol**--helps keep cholesterol from building up in the arteries
- **Triglycerides**--another form of fat in your blood

If it is not possible to get a lipoprotein profile done, knowing your total cholesterol and HDL cholesterol can give you a general idea about your cholesterol levels. If your total cholesterol is 200 mg/dL* or more or if your HDL is less than 40 mg/dL, you will need to have a lipoprotein profile done. See how your cholesterol numbers compare to the tables below.

Total Cholesterol Level	Category
Less than 200 mg/dL	Desirable
200-239 mg/dL	Borderline High
240 mg/dL and above	High

- Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dL) of blood.

LDL Cholesterol Level	LDL-Cholesterol Category
Less than 100 mg/dL	Optimal
100-129 mg/dL	Near optimal/above optimal
130-159 mg/dL	Borderline high
160-189 mg/dL	High
190 mg/dL and above	Very high

HDL (good) cholesterol protects against heart disease, so for HDL, higher numbers are better. A level less than 40 mg/dL is low and is considered a major risk factor because it increases your risk for developing heart disease. HDL levels of 60 mg/dL or more help to lower your risk for heart disease.

Triglycerides can also raise heart disease risk. Levels that are borderline high (150-199 mg/dL) or high (200 mg/dL or more) may need treatment in some people.

What Affects Cholesterol Levels?

A variety of things can affect cholesterol levels. These are things you can do something about:

Diet. Saturated fat and cholesterol in the food you eat make your blood cholesterol level go up. Saturated fat is the main culprit, but cholesterol in foods also matters. Reducing the amount of saturated fat and cholesterol in your diet helps lower your blood cholesterol level.

Weight. Being overweight is a risk factor for heart disease. It also tends to increase your cholesterol. Losing weight can help lower your LDL and total cholesterol levels, as well as raise your HDL and lower your triglyceride levels.

Physical Activity. Not being physically active is a risk factor for heart disease. Regular physical activity can help lower LDL (bad) cholesterol and raise HDL (good) cholesterol levels. It also helps you lose weight. You should try to be physically active for 30 minutes on most, if not all, days.

Things you cannot do anything about also can affect cholesterol levels. These include:

Age and Gender. As women and men get older, their cholesterol levels rise. Before the age of menopause, women have lower total cholesterol levels than men of the same age. After the age of menopause, women's LDL levels tend to rise.

Heredity. Your genes partly determine how much cholesterol your body makes. High blood cholesterol can run in families.

What Is Your Risk of Developing Heart Disease or Having a Heart Attack?

In general, the higher your LDL level and the more risk factors you have (other than LDL), the greater your chances of developing heart disease or having a heart attack. Some people are at high risk for a heart attack because they already have heart disease. Other people are at high risk for developing heart disease because they have diabetes (which is a strong risk factor) or a combination of risk factors for heart disease.

Treating High Cholesterol

The main goal of cholesterol-lowering treatment is to lower your LDL level enough to reduce your risk of developing heart disease or having a heart attack. The higher your risk, the lower your LDL goal will be. There are two main ways to lower your cholesterol:

- Therapeutic Lifestyle Changes (TLC)--includes a cholesterol-lowering diet (called the TLC diet), physical activity, and weight management. TLC is for anyone whose LDL is above goal.
- Drug Treatment--if cholesterol-lowering drugs are needed, they are prescribed by a doctor and used together with TLC treatment to help lower your LDL.

To reduce your risk for heart disease or keep it low, it is very important to control any other risk factors you may have such as high blood pressure and smoking.

Source:

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health
National Heart, Lung, and Blood Institute
NIH Publication No. 01-3290