

# All About Cholesterol

Cholesterol is confusing. Very confusing. There's good cholesterol. There's bad cholesterol. There's cholesterol in some types of foods but not in others. Cholesterol discussions involve acronyms, formulas and big technical words. Even the best-informed healthcare consumer has a hard time sorting it all out.

## What is cholesterol?

Cholesterol is a soft, waxy substance. Your body needs cholesterol. Tiny amounts of it are found in every cell in your body. Cholesterol has three important functions:

- It helps form the outer coating of cells.
- It helps digest food.
- It helps make vitamin D and hormones, like estrogen in women and testosterone in men.

Your body makes all the cholesterol it needs. Cholesterol also is found in foods of animal origin.

Cholesterol molecules travel throughout your body in the bloodstream. They travel in particles called lipoproteins. These particles have fat known as a lipid on the inside and protein on the outside. That's why they are called lipoproteins.

## Good vs. Bad Cholesterol

Lipoproteins come in either of two models: low-density lipoprotein, or LDL, and high-density lipoprotein, or HDL.

LDL is the so-called "bad" cholesterol. LDLs can get stuck along artery walls. (Arteries are blood vessels that carry blood from your heart to your body.) The higher your LDL level, the greater your risk for heart disease.



HDL cholesterol is often called "good" cholesterol. It carries cholesterol from other parts of your body back to your liver, where it becomes harmless. High levels of HDL will lower your risk for heart disease.

To help remember the two types, imagine that the **H** in HDL stands for **H**ealthy, and the **H**igher it is, the better. And match the **L** in LDL with **L**ousy, and the **L**ower it is, the better.

## Blood vs. Dietary Cholesterol

The cholesterol circulating in your blood is called blood cholesterol or serum cholesterol.

The cholesterol in your food is called dietary cholesterol. It is a relatively minor contributor to blood cholesterol levels. Foods high in saturated or trans fats are the bigger culprits in unhealthy cholesterol levels. Packaged foods list cholesterol content on the Nutrition Facts panel. The 2010 Dietary Guidelines for Americans recommend limiting cholesterol intake to no more than 300 milligrams per day.



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## The Plaque Plague

If there's too much cholesterol in your blood, it gets stuck to artery walls. Over time, this gunk hardens into plaque. Plaque is made of fat, cholesterol, calcium and other substances found in your blood. As plaques grow, the vessels become narrower and less flexible. This condition is called atherosclerosis or "hardening of the arteries."

When atherosclerosis affects the major blood vessels coming from your heart, the condition is called coronary heart disease (CHD). If a blood clot forms and blocks one of these narrow arteries it can cause a heart attack or stroke. Coronary heart disease is the number one disease responsible for death in America. About 1 in 5 Americans are at risk for coronary heart disease.

## Get Tested

Beginning at age 20 everyone should have his or her cholesterol levels checked at least every 5 years. Talk to your doctor about how often you should be tested.

Cholesterol is measured with a simple blood test. The test is also called a lipoprotein panel or lipid profile. Most people will need to fast for 9 to 12 hours before the test. Test results typically report:

- Total cholesterol
- HDL cholesterol
- LDL cholesterol, and
- Triglycerides (a type of fat in the blood)

A total cholesterol score of less than 180 is considered healthy.

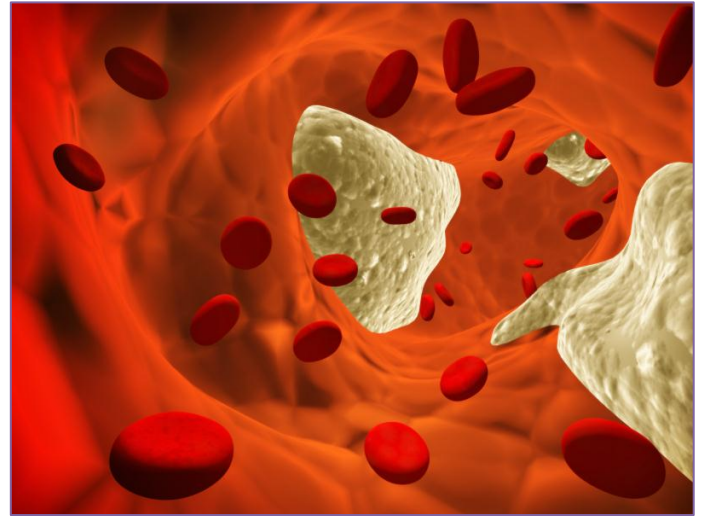
If you have high levels of harmful LDL cholesterol and triglycerides, low levels of good HDL cholesterol and other risk factors for heart disease, your doctor may prescribe drugs to help lower your risk. The drugs work best when combined with a healthy diet and regular physical activity.

## Lifestyle Changes That Matter

Even if you are taking drugs to lower your cholesterol, diet and exercise still matter. This assures that you take the lowest necessary dose.

To lower LDLs and total cholesterol:

- Avoid fatty foods, especially foods high in saturated fat and trans fats.
- Eat more whole grains, vegetables, fruits and beans.
- Get regular physical activity.
- If you're overweight, lose weight.



To increase the levels of HDL cholesterol:

- Get regular physical activity.
- If overweight, lose weight.
- Quit smoking.
- Avoid foods with trans fats.
- Cook with oils high in monounsaturated fats such as olive oil, safflower oil and canola oil. Avoid oils high in polyunsaturated fats such as corn, soybean and sunflower oils. Cooking oil labeled "vegetable oil" generally has a high percentage of soybean oil.

Diets high in empty calories from sugar and simple carbohydrates may raise triglycerides. To lower triglycerides:

- Eat more beans and whole grains.
- Eat more fish for their beneficial omega-3 fatty acids.
- And limit alcohol.

## Summary

Excess LDL cholesterol in your blood can get trapped in artery walls, leading to coronary heart disease. High cholesterol is treated with lifestyle changes and sometimes medication. The main goal of treatment is to lower your LDL cholesterol enough to reduce your risk of heart disease. Talk to your doctor about cholesterol testing and how to maintain your cholesterol at a healthy level.

**Resources:**  
<http://www.nhlbi.nih.gov/>  
[www.americanheart.org](http://www.americanheart.org)