



What Your Doctor Means By... Cholesterol

Like oil and water, *cholesterol* (a waxy, fat-like substance) and blood don't mix. It is produced naturally from the liver and supplied in your diet, primarily from animal foods. However, problems arise when there is too much cholesterol in the blood, increasing your risk for heart disease or stroke. This information can help you understand cholesterol and the options available for a healthy heart.

Q What are the "good" and "bad" cholesterol?

Because cholesterol can't dissolve in the blood, which is made mostly of water, it is transported by protein packages called **lipoproteins**. **Low-density lipoprotein-cholesterol (LDL-C)** is "bad" because it carries cholesterol to artery walls and forms deposits, also known as **plaque**. This can lead to a condition called **atherosclerosis** or "hardening" of the artery walls. With time, plaque builds up and blood flow slows down or stops. **High-density lipoprotein-cholesterol (HDL-C)** is "good" because it carries cholesterol from artery walls back to the liver and can reduce or prevent plaque build up.

Q What are triglycerides?

Like cholesterol, triglycerides (TGs) are **lipids** (fats) that circulate in your bloodstream and are contained in lipoproteins. They are the most common type of fat in the body and are important to your health. However, high amounts of TGs can increase your risk for heart disease.

Q What is a lipid profile?

It's a blood test that measures your levels of total cholesterol (TC), HDL-C, LDL-C, and TG. All of these levels are expressed in milligrams per deciliter (mg/dL) of blood. If any or all of your levels are unsafe, you may be at increased risk for heart disease, heart attack, stroke, and other diseases of the blood vessels.

Q What do all of those numbers mean?

- ▶ **TC:** Values less than 200 mg/dL are desirable; those of 200 to 239 are borderline high; and those at 240 or more are considered high. Your doctor may want to talk with you about how to lower elevated values.
- ▶ **HDL-C:** Higher levels of this are actually better. Values less than 40 mg/dL (for men) and less than 50 mg/dL (for women) are low, and are considered a major risk factor for heart disease. Values of 60 mg/dL or more are high—and are seen as being *protective* against heart disease.
- ▶ **LDL-C:** Values less than 100 mg/dL are optimal; 100 to 129, near optimal; 130 to 159, borderline high; 160 to 189, high; and those 190 or more are very high.
- ▶ **TG:** Values less than 150 mg/dL are normal; 151 to 199, borderline high; 200 to 499, high; and those 500 or more are very high.

Q How can I improve my lipid levels?

First, do your best to change your lifestyle. This includes following a cholesterol-lowering diet, losing weight, quitting smoking, and increasing physical activity. Saturated fats (found in meat, poultry, whole-milk dairy products, lard, and tropical oils such as coconut, palm kernel, and palm) are the worst offenders; they make your body hold onto cholesterol, which can end up on your artery walls. Regular aerobic exercise offers several benefits: It may reduce TG and LDL-C, and may raise HDL-C.

Q What's so important about lowering LDL-C?

Research has shown that reducing your LDL-C level will decrease your risk of developing heart disease. The National Cholesterol Education Program recently published new guidelines for LDL-C testing and treatment. Your personal LDL-C goal depends on your risk for heart disease.

SUPPOSE THAT'S NOT ENOUGH...

Your doctor may prescribe medication from one or more of these drug classes:

- ▶ **Statins:** Drugs such as Lipitor®, Zocor®, Pravachol®, Lescol®, and Mevacor® block cholesterol production in the liver. They are particularly effective in reducing LDL-C, which is the main goal of cholesterol-lowering drug treatment.
- ▶ **Nicotinic acid:** Also known as niacin (Niaspan®, Nicomide™, among others), this works in the liver to reduce blood fats. It lowers TG and LDL-C, and raises HDL-C.
- ▶ **Fibrates:** Drugs such as Lopid® and Tricor® lower TG in the blood. They also raise HDL-C.
- ▶ **Bile-acid-binding resins:** These drugs work in the intestines and help to lower LDL-C. Three resins—Questran®, Colestid®, and WelChol™—are available.
- ▶ **Omega-3 fatty acids:** Omacor® helps to reduce very high TG levels when used as an adjunct to diet.

IN CLOSING...

Heart disease, stroke, and atherosclerosis are the leading causes of death in men and women in the United States. Ask your doctor to measure your lipid profile and your risk. Together, you can decide what treatment is best for you. Most people should improve their diet and get more exercise; some also need medication. These steps reduce disease and death and help to keep people healthy.

Committee on Cardiovascular and Metabolic Diseases™



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TALK TO YOUR PHYSICIAN
OR VISIT WWW.CCMDWEB.ORG**

Polaris Parkway IM/Peds
110 Polaris Parkway
Suite 250
Westerville, OH 43082
(614) 865-4800