



Patient Information

Update on Getting a Handle on High Cholesterol

Your body needs cholesterol (kuh-less-tuh-rawl), a waxy substance that's found in the fats in your body, to continue to build healthy cells. The cholesterol is used by the body to produce hormones, vitamin D, and the acids that help you digest fat. A small portion of the cholesterol in your body comes directly from food, but most of it is made in your liver from saturated fats that you eat.

The cholesterol in your body does not travel by itself; instead, it links with other substances called proteins to form lipoproteins (lih-poh-**pro**-teenz). The 2 most important lipoproteins are (1) low-density lipoprotein (LDL) or bad cholesterol, and (2) high-density lipoprotein (HDL) or good cholesterol. The more LDL cholesterol there is in your blood, the greater the risk of heart disease developing; whereas the more HDL cholesterol, the lower the risk.

A person needs only a small amount of cholesterol to meet the body's needs. If you have high cholesterol, the level in your blood is outside the normal range. Too much cholesterol in the bloodstream can cause the excess to be deposited in the arteries and cause disease.

How do I know if I'm at risk?

Men younger than 55 and women older than 55 are more likely to have high cholesterol, both facing a higher risk with increased age. A variety of other factors exist that can cause high cholesterol: a family history of high cholesterol; weight gain; age and sex; alcohol and tobacco use; and mental stress—people tend to console

their stress by eating fatty foods.

Trans fat is the common name for unsaturated fat with trans-isomer fatty acids. These fats are sometimes called monounsaturated or polyunsaturated, but never saturated. Eating a lot of saturated and trans fats will increase the amount of cholesterol in your blood. It is unclear why this happens, however. Saturated fats can be found in meat, butter, and other dairy products. Trans fats can be found in cookies, cakes, pastries, and fast food. The liver turns both these fats into cholesterol.

The more risk factors you have and the higher your LDL level, the greater your risk of heart problems developing. Obesity and physical inactivity, among the factors discussed above, are conditions that need to be corrected as soon as possible to avoid any complications.

What are the warning signs?

High cholesterol does not cause symptoms, and the only way to find out if your blood cholesterol level is too high is to get tested. However, high cholesterol can be a risk factor for other illnesses, such as heart disease or stroke, which will show warning signs. If you are experiencing symptoms such as chest pain or shortness of breath, tell your doctor, as you may be seeing the early stages of heart disease and your cholesterol will need to be managed.

What tests do I need?

A blood test, lipid (fat) profile, will be required to determine your cholesterol level. This test is done following a 9- to 12-hour



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fast and details your total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides (another form of fat in your blood). If you are unable to get a lipoprotein profile done, knowing your total cholesterol and HDL level can give you a good idea of your cholesterol levels.

Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dL) of blood. Most people should aim for an LDL level that registers below 130 mg/dL. If you have other risk factors for heart disease, your target level may be lower, around 100 mg/dL. If your total cholesterol is 200 mg/dL or more, you will be required to have a lipoprotein profile.

How can I avoid the problem?

According to the National Cholesterol Education Program guidelines, everyone aged 20 years and older should have their blood cholesterol level measured at least once every 5 years. Knowing and understanding your cholesterol level is the first step in gaining control over the situation.

Set goals for your dietary lifestyle and strive to meet them. Reach for a daily intake of less than 7% of your calories from saturated fat and less than 200 mg of cholesterol from the food you consume. Adding more soluble fiber—found in cereal grains, beans, peas, fruits, and vegetables—will also help you lower your cholesterol; be sure to read the nutritional label on the food packages, to ensure it contains the right ingredients.

How is it treated?

The goal of cholesterol-lowering treatment is to lower your LDL level and reduce your risk of heart disease or heart attack. The

2 main ways to lower your cholesterol levels are therapeutic lifestyle changes (TLC) and drug treatment.

TLC involves a cholesterol-lowering diet, physical activity, and weight management. If changing your lifestyle does not improve your cholesterol levels, your doctor will prescribe a drug treatment, which consists of cholesterol-lowering drugs used with TLC to lower your LDL levels. It's important to continue following your cholesterol-lowering diet and working toward a healthy lifestyle while you are taking the medications.

Several types of drugs can be offered to lower cholesterol such as statins, bile acid sequestrants, nicotinic acid, fibric acids, and cholesterol absorption inhibitors. The statins have proven to be very effective in lowering the LDL levels by slowing the production of cholesterol and increasing the liver's ability to remove the LDL cholesterol already in the blood. Some statin drugs, available through a doctor's prescription, are Lipitor, Lescol, Mevacor, and Crestor.

For more information about high cholesterol, visit the Web sites of the National Heart, Lung, and Blood Institute's National Cholesterol Education Program (<http://www.nhlbi.nih.gov/about/ncep>) and the American Heart Association (<http://www.heart.org/HEARTORG>).

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