



Frequently Asked Questions about High Blood Cholesterol

What is cholesterol?

Cholesterol is a fatty substance made by the liver and found in all parts of your body. Your body uses cholesterol to produce hormones, vitamin D, and the bile acids that help to digest fat. It takes only a small amount of cholesterol in the blood to meet these needs, and your liver makes all the cholesterol your body needs.

What is high blood cholesterol?

High blood cholesterol means that there is too much cholesterol (a fat-like substance) in your blood. Your risk for getting heart disease or having a heart attack goes up when your cholesterol level is too high. If you have high blood cholesterol, fatty deposits called *plaque* can build up on the walls of the arteries. This is called *atherosclerosis*. If the arteries that carry blood to your heart (the *coronary arteries*) are affected, less blood and oxygen can get to your heart. This can cause chest pain (*angina*) and heart attacks.

Do women have to worry about cholesterol?

Yes. Heart disease is the number one cause of death for both women and men in the United States. High blood cholesterol levels raise your chances of getting heart disease. Blood cholesterol levels in both men and women begin to go up around age 20. Before *menopause*, women have lower cholesterol levels than men of the same age. After menopause, a woman's cholesterol level can go up.

What are “bad cholesterol” and “good cholesterol”?

Cholesterol travels through the blood in packages called *lipoproteins*.

- *Low density lipoprotein (LDL)* is called “bad cholesterol” because it is the main source of cholesterol buildup and blockage in the arteries. Reducing high levels of LDL has been proven to reduce heart disease risk.
- *High density lipoprotein (HDL)* is known as “good cholesterol” because it takes the bad cholesterol out of your blood and keeps it from building up in your arteries. For HDL, higher numbers are better. Low HDL levels (especially under 40) are linked to a higher risk of heart disease, while HDL levels over 60 protect against heart disease.

It is important to know your LDL and HDL levels in addition to your total cholesterol level.

How often should I have my cholesterol levels checked?

The National Cholesterol Education Program (NCEP) of the National Heart, Lung, and Blood Institute, National Institutes of Health, issued new guidelines for preventing and managing high blood cholesterol in 2001. NCEP indicates that everyone over age 20 should have their cholesterol measured at least once every five years. The preferred test for cholesterol levels is a *lipoprotein profile*. This is a fasting blood test (where you fast for 9 to 12 hours before the test is done) to check your cholesterol levels (measured in mg/dL, or milligrams per deciliter of blood), including:

- your total blood cholesterol level;
- your LDL level (bad cholesterol);
- your HDL level (good cholesterol);
- your *triglyceride* (another form of fat in the blood) level.

What do my cholesterol numbers mean?

Talk to your health care provider about the results of your cholesterol test. The following guidelines come from the National Cholesterol Education Program (NCEP) of the National Heart, Lung, and Blood Institute, National Institutes of Health. Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dL) of blood.

- **Total cholesterol level** – a level of less than 200 mg/dL is desirable. But even levels of 200-239 mg/dL (borderline high) can increase your risk of heart disease.

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

LDL (bad) cholesterol – a level of 160 mg/dL or above is high. Work with your health care provider to determine a goal LDL level that's best for you.

LDL Cholesterol Level	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** – a level of 60 mg/dL or more is good and helps to lower your risk for heart disease. Remember that HDL (good) cholesterol protects against heart disease, so for HDL, higher numbers are better. A level less than 40 mg/dL is low and increases your risk for developing heart disease.

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

What makes my bad cholesterol levels go up?

The main cause of high blood cholesterol is eating too much fat, especially *saturated fat*. Saturated fats are found in animal products, such as meats, milk and other dairy products that are not fat free, butter, and eggs. Some of these foods are also high in cholesterol. Fried fast foods and snack foods often have a lot of fat.

Being overweight and not exercising can make your bad cholesterol go up and your good cholesterol go down. Also, after women go through menopause, their bad cholesterol levels tend to go up. There is also a rare type of inherited high cholesterol that often leads to early heart disease.

How can I lower my bad cholesterol level?

Reducing your LDL (bad) cholesterol and total blood cholesterol levels can greatly lessen the chances of getting heart disease. Most people can lower their blood cholesterol by changing their diet, losing excess weight, and exercising more. These changes can also help reduce your risk for diabetes and lower your blood pressure.

- Change your diet. Choose a diet that is low in saturated fat and cholesterol to help reduce LDL levels. Most saturated fat and all cholesterol in our diets come from animal sources (meats including poultry and fish, dairy products that are not nonfat products, butter, eggs). *Trans fat* is another type of fat created by *hydrogenation* of unsaturated fats, and your intake of trans fats should also be limited. Trans fats are found in many fried and baked fast foods and snack products and in some margarines.
- Lose weight. Losing weight if you are overweight can help lower LDL. Weight loss is especially important for those with a group of risk factors called *metabolic syndrome*. The risk factors of metabolic syndrome include abdominal obesity, defined as having a large waist measurement (more than 40 inches for men and more than 35 inches for women), and high triglyceride or low HDL levels.
- Be physically active. Regular physical activity (30 minutes on most or all days of the week) is recommended for everyone. It can help raise HDL and lower LDL levels. This is especially important for those with metabolic syndrome.

How can I plan meals that have low saturated fat and cholesterol levels?

- Choose fish, poultry, and lean cuts of meat and remove the fat and skin before eating. Eat no more than about 6 ounces per day. Broil, bake, roast, or poach foods rather than frying them. Cut down on high fat meats, including sausage, bacon, and cold cuts such as salami and bologna. Limit organ meats such as liver, kidney, and brains.

- Use skim (fat-free) or low-fat (1%) milk and cheeses, and low-fat or nonfat yogurt. Instead of butter, use liquid or soft margarine or vegetable oils that are low in saturated fat and contain little or no trans fat (hydrogenated fat). Use all fats and oils sparingly. Eat egg yolks only in moderation. Egg whites contain no fat or cholesterol and can be eaten often.
- Eat fruits and vegetables (at least 5 servings a day), as well as cereals, breads, rice, and pasta made from enriched or whole grains (such as rye bread or whole-wheat spaghetti).

Many packaged and processed foods are high in saturated fats and some also contain trans fats. Get in the habit of reading food labels. Look for the "Nutrition Facts" on the label and choose products that are lowest in fat. Also read product labels for cholesterol content.

It is usually easier to follow a diet low in saturated fat and cholesterol when preparing meals at home than when eating out. But it is possible to make careful food choices and avoid overeating whether you are eating in a restaurant or at home.

What kinds of exercise should I do to lower my high blood cholesterol?

Get at least 30 minutes of exercise most days of the week. Even low to moderately intensive activity, if done daily, can provide benefits. Talk to your health care provider about the safest and best ways for you to exercise. Some examples of good ways to exercise include walking, yard work, housework, and dancing.

More vigorous exercise can raise your HDL level and will improve the overall fitness of your heart. This kind of activity is called *aerobic* and includes jogging, swimming, jumping rope, or brisk walking or bicycling. Build up your activity level gradually over a period of several weeks.

Be sure to check with your doctor before starting a vigorous exercise program.

What else can I do to lower my risk of heart disease?

- If you smoke, stop. Ask your health care provider for help if you find it hard to stop on your own.
- If you have high blood pressure or diabetes, follow your treatment plan. Losing weight, exercising, and eating a healthy diet can help you control your high blood pressure or diabetes as well as your cholesterol.

What if I need medicine for high cholesterol levels?

Medicine to lower your cholesterol levels, if needed, is used along with lifestyle changes. It is still very important to adopt a diet low in saturated fat and cholesterol, increase your physical exercise, and manage your weight.

The main goal of cholesterol-lowering treatment is to lower your LDL (bad cholesterol) level enough to reduce your risk of getting heart disease or having a heart attack. There are several types of drugs available for cholesterol lowering, including *statins*, *bile acid sequestrants*, *nicotinic acid*, and *fibric acids*. Your doctor will prescribe medicine for you if needed.

For more information...

Learn more about high blood cholesterol by contacting the National Women's Health Information Center (NWHIC) at (800) 994-9662 or the following organizations.

National Heart, Lung, and Blood Institute

Phone Number (s): (301) 592-8573

Internet Address: <http://www.nhlbi.nih.gov/index.htm>

National Cholesterol Education Program

National Heart, Lung, and Blood Institute

Internet Address: <http://www.nhlbi.nih.gov/chd/>

The Heart Truth

National Awareness Campaign for Women about Heart Disease

National Heart, Lung, and Blood Institute

Phone Number(s): (800) 793-2665

Internet Address: <http://www.nhlbi.nih.gov/health/hearttruth/index.htm>

American Heart Association

Phone Number(s): (800) 793-2665

Internet Address: <http://www.americanheart.org/>

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