

What You Should Know About Cholesterol

If you think that cholesterol and heart disease are “men’s problems,” you’re making a dangerous mistake. Although the female hormone estrogen helps to regulate cholesterol, your body stops making estrogen at menopause, removing your protection against heart disease. And because your cholesterol can be high even before menopause, it’s a concern that no woman can afford to ignore.

What is cholesterol?

Cholesterol is a fatty substance found in blood and other tissues throughout your body. It is essential to almost every organ function, which is why your liver manufactures it. In fact, the liver produces all the cholesterol you need. However, we also eat foods containing cholesterol. When you produce or consume more cholesterol than your body needs, the excess is deposited on the walls of your arteries and other blood vessels, leading to

hardening of the arteries (*atherosclerosis*). This causes the arteries to narrow or even become blocked; a blockage in an artery leading to the heart causes a heart attack, while a blockage in a vessel in the brain causes a stroke.

Are there different types of cholesterol?

Yes. Different types of cholesterol include *low-density lipoproteins (LDL)*, *triglycerides*, and *high-density lipoproteins (HDL)*. The highest amounts of cholesterol are in LDL. By contrast, HDL are “scavengers” that actually remove excess cholesterol from the blood. Finally, triglycerides may be a more important cause of heart disease in women than in men.

What should my cholesterol level be?

You should have your cholesterol level checked every 5 years after age 20 years. This involves a blood (*serum*) test. The various types of cholesterol can be measured separately.

Total Cholesterol.—Total cholesterol should be under 200; a level of 240 or more is considered high.

HDL.—It appears that an HDL level of 60 or more helps to protect against heart disease, and is considered a “negative” risk factor for heart disease; that is, it can cancel out some other risk factor you might have. However, an HDL level below 40 requires treatment.

LDL.—Your LDL level is a better predictor of heart disease than the total cholesterol level, and should be 130 or less. A value of 160 or more puts you in the high-risk category.

Triglycerides.—Triglyceride levels in women should be 150 or less, although 200 is considered normal; values of 400 or higher are classified as high risk.

How dangerous are high cholesterol levels?

Abnormal cholesterol levels always require attention, but your risk of heart disease depends on other factors as well. Therefore, women with high cholesterol who also have high blood pressure (hypertension), diabetes, and/or a family history of heart disease have a substantially greater risk of heart disease. Life-style factors such as smoking, obesity, and lack of exercise also increase this risk.

What should I do if my cholesterol levels are too high?

The first step is to change your diet and exercise habits. For people with total cholesterol levels between 200 and 300, these changes may be enough to do the trick.

Eating a low-cholesterol diet can be difficult, because several types of fats must be considered—most notably *saturated fats* and *trans-fatty acids*. All fats are made up of hydrogen, carbon, and oxygen; saturated fats have the most hydrogen, and they raise cholesterol the most. They stimulate your liver to make cholesterol, so watching your intake of saturated fats is the key to a low-cholesterol diet. Foods high in saturated fats include red meat, whole-milk dairy products, lard, palm oil, and coconut oil.

Trans-fatty acids (*trans fats*) come from processed foods such as french

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fries, potato chips, cookies, crackers, and margarine. Consuming trans fats lowers HDL and raises LDL, and may be more harmful than saturated fats. On food labels, trans fats may be called “hydrogenated” or “partially hydrogenated” oils.

What does all this mean when you’re shopping for groceries or going to a restaurant? Recommendations include:

- Choosing nonfat or low-fat dairy products (milk, yogurt, cheeses, and frozen desserts).
- Selecting lean cuts of meat, eating less beef and eggs and more fish, and removing the skin from chicken and turkey.
- Grilling and broiling rather than frying.
- Avoiding foods that contain vegetable shortening, buying soft margarine in tubs rather than hard sticks, and cooking with canola or olive oil.
- Increasing your intake of fresh fruits and vegetables, which contain cholesterol-lowering *phytochemicals*.
- Raising fiber intake to 25 grams per day.
- Reducing alcohol intake.

In addition, regular exercise is essential to raise HDL and reduce your weight, which can in turn lower cholesterol. You do not have to join a gym or buy expensive equipment; walking for 30 minutes, at least five or six days a week, works just fine.

What about drug therapy?

If a better diet and more exercise do not get your cholesterol under control, if you have a strong family history of heart disease, or if your cholesterol is extremely high, you will probably need medication. In fact, drugs are so effective in reducing cholesterol-related deaths that many authorities now recommend them for anyone with high LDL levels. Several types of medications are available.

Bile Acid Resins.—These include cholestyramine (LoCHOLEST, Questran), and colestipol (Colestid), and are prescribed for mild to moderate high cholesterol. Side effects may include constipation, heartburn, nausea, bloating, gas, and liver problems. Resins can also interfere with other common drugs such as digoxin, warfarin (heparin), and beta-blockers.

Fibrates.—Such drugs include fenofibrate (Tricor) and gemfibrozil (Lopid). Fibrates raise HDL and lower triglycerides, but do not lower LDL much. They are sometimes prescribed for patients with high triglycerides and low HDL who do not respond to or can’t tolerate other drugs. Possible side effects include nausea, bloating, gas, and cholesterol gallstones.

Hormone Replacement Therapy (HRT).—Although HRT can have some beneficial effects on cholesterol, several studies have found that the use of combined estrogen and progestin do not decrease the risk of heart disease, and may even increase it. Therefore, HRT is not currently recommended to control cholesterol.

Niacin (nicotinic acid).—Available in preparations such as Nicobid, niacin is actually vitamin B₃. It lowers total cholesterol, LDL, and triglycerides, and raises HDL. However, many patients can’t tolerate the side effects, which may include facial flushing, hot flashes, nausea, indigestion, gas, high blood sugar, and liver problems. Niacin use requires close monitoring by your doctor.

Statins.—Drugs in this class include atorvastatin (Lipitor), cerivastatin (Baycol), fluvastatin (Lescol), lovastatin (Levacor), pravastatin (Pravachol), and simvastatin (Zocor). Statins lower cholesterol and triglycerides by 20% to 60% and raise HDL slightly. Rates of side effects are low, but nausea, gas, constipation, and abdominal cramping may occur, and muscle or liver prob-

lems have been reported. Generally, statins are so effective and well-tolerated that they are now regarded as the treatment of choice for high cholesterol. They may also help to keep the blood vessels in good condition and prevent blood clots.

Other Therapies

Do not try any of these therapies without first discussing them with your doctor.

Cholesterol-lowering margarines.—Cholesterol-lowering margarines (Benecol, Take Charge) have plant substances that may block cholesterol absorption. However, it’s possible that they may also lower levels of vitamins A and E. These margarines also cost much more than other margarines.

Fish oil.—Fish oil supplements lower triglycerides but may raise LDL, and are only recommended for women with high triglycerides.

Garlic.—Garlic may decrease total cholesterol and LDL cholesterol a little, but there is no solid proof of this.

Soy protein.—The *isoflavones* in soy proteins act like estrogen, and a diet high in soy proteins can slightly lower total cholesterol, LDL, and triglycerides, and raise HDL.

Treating high cholesterol takes a lifelong commitment. Once you find an effective combination of diet, exercise, and drug therapy, you have to stick with it. If you do not, your high cholesterol will return. Tell your doctor if you’re having unpleasant side effects from a drug; there’s a wide variety of cholesterol medications, and you can always switch to another one.

Remember, even if you’re taking cholesterol-lowering medications, *you still have to watch your diet and get regular exercise*. Drugs won’t help much unless you do your part to control lifestyle risk factors such as obesity and smoking.