Know Your Cholesterol Number

Kathleen M. Stadler and Forrest Thye*

What is your cholesterol number and why is it important? Cholesterol is a fat-like substance that is carried by the blood to all parts of your body. Though some of the cholesterol comes from food, the majority is made by your body. If there is too much cholesterol in your blood stream, there is a chance that it will eventually collect in the walls of the blood vessels and, in time, even clog the blood vessel(s). If that should happen, you could have a heart attack or a stroke.

One way to reduce your risk of a heart attack or stroke is to decrease the amount of cholesterol in your blood stream. Your total cholesterol (TC) number is the number of milligrams of cholesterol in a deciliter of blood (mg/dl). Total cholesterol and high density lipoprotein (HDL) cholesterol should be measured at least once every five years in all adults 20 years of age and over. It is a good idea to have a second and maybe even a third test because cholesterol levels vary naturally from day to day.

Find your number to determine your next step.

**Cholesterol Numbers**

<table>
<thead>
<tr>
<th>Level</th>
<th>Total Cholesterol (mg/dl)</th>
<th>LDL-Cholesterol (mg/dl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desirable</td>
<td>less than 200</td>
<td>less than 130</td>
</tr>
<tr>
<td>Borderline</td>
<td>200-239</td>
<td>130-159</td>
</tr>
<tr>
<td>High</td>
<td>240 or above</td>
<td>160 or above</td>
</tr>
</tbody>
</table>

**Desirable TC Levels**

A TC NUMBER OF 200 OR LESS IS GOOD! You should have another test in three to five years. However, if you have two or more of the risk factors listed, talk to your doctor about having tests more frequently.

How can you keep your blood cholesterol at a low level? Get plenty of exercise. Stop smoking. Keep your weight down, or if you are overweight, lose those excess pounds. Eat a variety of foods according to the Food Guide Pyramid.

**Good Cholesterol (HDL) & Bad Cholesterol (LDL)**

Cholesterol has to team up with protein to get through the blood vessels. HDL, a high density lipoprotein made up of lipid (another word for fat) and protein, has more protein than fat and appears to carry the cholesterol it contains to the liver for excretion. HDL-cholesterol is known as the “good” cholesterol. Therefore, you want a high HDL number because that indicates a high level of this good cholesterol in your blood. An average HDL number is in the mid-forties range for a man and in the fifties range for a woman. A HDL number less than 35 is considered a risk factor. Please see the chart on coronary heart disease risk factors on page 2.

LDL is a low density lipoprotein (more fat, less protein). The cholesterol it contains is carried to the tissues and may be deposited in the blood vessels. LDL-cholesterol is known as the “bad” cholesterol. Thus, a lower LDL number is more beneficial than a higher one. The LDL number is almost always higher than the HDL number.

The doctor or lab report may give you a TC/HDL ratio number. The ratio number is calculated by dividing the TC number by the HDL-cholesterol number. In general, a number less than 5 is associated with a decreased risk of heart disease. Make sure to ask your doctor to clarify the ratio number and how it was calculated.

*Extension Specialist and Associate Professor; Human Nutrition and Foods, Virginia Tech

Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, religion, sex, age, veteran status, national origin, disability, or political affiliation. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. J. David Barrett, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg.

Lorena W. Lyons, Administrator, 1890 Extension Program, Virginia State, Petersburg.
Borderline TC Levels

A TC NUMBER BETWEEN 200 AND 239 MAY INDICATE A PROBLEM. You should go to your doctor in a few days for an additional test. It is especially important to have a follow-up test if you have two or more of the risk factors. You may be asked to "fast" or go without food for the 12 hours before the test. A larger amount of blood (more than a finger prick) is usually taken for the second test. The doctor will ask the lab to measure the total amount of cholesterol in your blood and also the amount of cholesterol that is present as HDL-cholesterol (the good kind) and as LDL-cholesterol (the bad kind).

High TC Levels

IF YOUR TC NUMBER IS 240 OR ABOVE, you should see your doctor for a follow-up test whether or not you have any of the other risk factors. You will be asked for a fasting blood sample to test for HDL- and LDL-cholesterol as well as total cholesterol.

If the second test shows that your total cholesterol is 200 or above OR that your LDL-cholesterol is above 130, the doctor will advise you to make changes in your diet.

It is important for persons with borderline or high TC levels to lower the amount and type of fat as well as the amount of cholesterol in their diets. Fewer than thirty percent of your total calories should come from fat. More of the fat should be monounsaturated (15%) than polyunsaturated (about 7-9%) or saturated (less than 7%). Remember to use oil instead of solid shortening or soft or liquid margarine. Cook with fat less frequently and avoid deep fat fried foods when eating out. Use no more than 6-8 teaspoons of added oil or fat a day.

Healthy Eating Check-Up

Reducing the amount of cholesterol in your diet will help, but you need to make some other dietary or lifestyle changes as well. Focus on lowering your total intake of fat, especially saturated fat.

✓ Choose lean meats, poultry, and fish—5 to 6 ounces per day.
✓ Remove as much of the fat in meats as possible.
✓ Bake, grill, broil, or stew meats.
✓ Drink skim or lowfat milk.
✓ Use yogurt to replace sour cream as yogurt has less fat and fewer calories. Frozen yogurt may have less fat than ice cream but not fewer calories.
✓ Use a soft or liquid margarine or spread that lists liquid oil as the first ingredient.
✓ Eat lots of fruits, vegetables, and whole-grain breads and cereals. Go easy on the butter, margarine, salad dressing, sauces, gravy, and syrup.
✓ Decrease egg yolks, liver, heart, brains, and other organ meats that contain a lot of cholesterol. Limit eggs to four or fewer per week or use egg whites.
✓ Cakes, cookies, pies, candy, and soft drinks are high in fat or sugar or both; choose smaller portions and eat or drink them less often.
✓ Beer, wine, and other alcoholic beverages can add a lot of unnecessary calories to your diet.
✓ Consider making other lifestyle changes such as taking up walking or other forms of exercise. This helps to burn calories. Stop smoking. Learn to deal with stress.
✓ Check with your doctor to see what kind of exercise is best for you. Walking, swimming, dancing, gardening, bicycling, and aerobic exercise classes are all possibilities

RETESTING: If your cholesterol was 200 or above, the doctor will probably want to check it again in about two months to see if it is coming down as a result of the changes that you have made in what you eat and do.

MEDICINES: Medicines are usually not prescribed until the doctor is sure that diet modification won't work.

FOR MORE INFORMATION: Contact a dietitian at your local hospital or in a private practice, a nutritionist with the health department, or a family and consumer sciences agent with Virginia Cooperative Extension.