

# Lifestyle Changes to Reduce Cholesterol

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You can take action to lower your blood cholesterol and improve your health.

## What is Cholesterol?

Cholesterol is a fat-like substance that is found in all parts of the body. It is needed for the body to work well. All the cholesterol we need could be made in our bodies, but we also get cholesterol from the food we eat.

- High cholesterol is a major risk factor for heart disease.
- As you get older, your cholesterol levels increase.
- High blood cholesterol runs in families.
- You can take action to lower your blood cholesterol and improve your health.

## Bad Cholesterol vs. Good Cholesterol

High density lipoprotein, or HDL, is sometimes called good cholesterol. Low density lipoprotein, or LDL, is referred to as bad cholesterol. It is important to understand the differences in the two types of cholesterol, because too much of one (LDL) or too little of the other (HDL) can increase your risk for heart disease. When there is too much LDL in your blood, it sticks to arteries and starts to form plaque. Plaque is a thick, hard deposit that can narrow and even block arteries, making it difficult for blood to flow. The higher the levels of LDL

in the blood, the higher the risk of heart disease.

HDL carries cholesterol away from the arteries and prevents the arteries from being clogged. Higher levels of HDL in the blood lower the risk of heart disease, stroke, and heart attack. Low levels of HDL also may increase the risk for these diseases, which is why it is important to keep both levels of cholesterol within the recommended ranges.

## HDL and LDL Levels

High blood cholesterol does not cause any special symptoms. A blood test, called a lipid panel or lipid profile, is the only way to know whether or not your blood cholesterol level is high. It measures total cholesterol, LDL and HDL cholesterol, and triglycerides, a type of fat in the blood. Table 1 shows normal, healthy levels of different types of fats in the blood.

**Table 1. Normal cholesterol levels.**

Type	Normal Levels*
Total Cholesterol	Less than 200 mg/dL
HDL (good)	60 mg/dL and above
LDL (bad)	Less than 100 mg/dL
Triglycerides	Less than 150 mg/dL

\*All levels are measured in milligrams per deciliter of blood

## Foods that Contain Cholesterol

Cholesterol is found only in animal products. Organ meats, shellfish, and eggs are high in cholesterol. The foods we eat and how they are prepared determines how much cholesterol we get from our diets.

**Table 2. Cholesterol in food.**

Food/Serving	Cholesterol/mg*
Beef liver, 4 oz	551 mg
Shrimp, 4 oz	223 mg
Egg, 1 large	213 mg
Oysters, 4 oz	125 mg
Ham, with skin, 4 oz	106 mg
Ricotta cheese, ½ cup	63 mg
Fruit Danish, 2.5 oz	56 mg
Whole milk, 1 cup	33 mg
Butter, 1 tablespoon	31 mg
Mozzarella cheese, 1 oz	22 mg

\*milligrams

## How to Reduce Cholesterol

You can control or reduce the amount of cholesterol in your blood by making changes in your diet. Limiting certain foods is one way to reduce the amount of cholesterol.



### Control Cholesterol with Diet

- Limit your intake of saturated and trans-fat as these tend to raise blood cholesterol levels. Trans-fats are found in fried foods, commercially prepared baked goods, fast food, and most margarines. Saturated fats are found in fatty meat, whole milk, skin of poultry, and processed meats. To reduce saturated and trans fat intake:
  - Use low-fat or fat free milk product instead of whole milk products.
  - Choose foods with less than 1 gram of saturated fat per serving.
- Eat foods high in fiber, such as whole grains, fruits, and vegetables. Soluble fiber decreases LDL (bad) cholesterol and bile and removes them from the body. Soluble fiber is

found in apples, oats, kidney beans, and barley. Aim to get 5 cups of fruits and vegetables and three or more servings of whole grains each day.

- Choose seafood at least twice a week. Seafood such as mackerel, herring, sardines, salmon, and lake trout are good sources of omega-3 fatty acids, which reduces blood pressure and your risk of developing blood clots. Other good sources of omega-3 include flaxseed, walnuts and canola oil.
- Avoid organ meats, such as liver and kidney, which are high in cholesterol and saturated fat.
- Substitute liquid vegetable oils for soft margarines.
- Limit processed meats, such as hot dogs, sausages, bologna, and salami. Processed meats are high in sodium, which can elevate blood pressure and raise the risk for heart disease.

### Control Cholesterol When Cooking

- Trim all visible fat from meat before cooking.
- Choose lean cuts of meat.
- Use liquid vegetable oils rather than solid fats.
- Substitute egg whites for whole eggs.

### Weight Management and Physical Activity

Regular physical activity can help lower your LDL and raise your HDL. It can also help you lose weight. Talk with your health care provider about what type of physical activity is best for you.

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**Table 3. Sample menu.**

Meal	Food Choices	Nutrient Analysis
<b>Breakfast</b>	<ul style="list-style-type: none"> <li>• ¾ cup oatmeal</li> <li>• 1 banana</li> <li>• 1 cup fat-free milk</li> <li>• ½ cup orange juice</li> </ul>	Calories: 390, total fat: 3g, saturated fat: 0.5g, cholesterol: 5mg, sodium: 150mg, dietary fiber: 6, total carbohydrates: 76g, protein: 17g
<b>Lunch</b>	<ul style="list-style-type: none"> <li>• Grilled chicken wrap: <ul style="list-style-type: none"> <li>• 1 whole wheat or spinach wrap</li> <li>• 1 grilled chicken breast, sliced</li> <li>• 3 slices avocado</li> <li>• 1 slice tomato</li> <li>• ½ cup shredded leaf lettuce</li> <li>• 1 oz. low-fat Swiss cheese</li> <li>• 1 Tbsp. low-fat mayo</li> <li>• 2 teas mustard</li> </ul> </li> <li>• 1 cup berries (strawberry or blueberries)</li> </ul>	Calories: 500, total fat: 14g, saturated fat: 3g, cholesterol: 50g, sodium: 1300mg, dietary fiber: 8g total carbohydrates: 50g, protein: 42g
<b>Dinner</b>	<ul style="list-style-type: none"> <li>• 3 oz. broiled salmon</li> <li>• 1 medium baked potato</li> <li>• 2 Tbsp. plain yogurt</li> <li>• 1 tsp. soft margarine</li> <li>• Sautéed mixed vegetables with garlic and ginger (broccoli, red peppers, cauliflower)</li> <li>• Tossed salad (olive oil and vinegar dressing)</li> </ul>	Calories: 570, total fat: 16g, saturated fat: 2.5g, cholesterol: 65mg, sodium: 160mg, total carbohydrate: 73g, dietary fiber: 12g, protein: 34g
<b>Snack</b>	<ul style="list-style-type: none"> <li>• 1 oz. trail mix (nuts, seeds, raisins)</li> <li>• 1 cup low-fat milk</li> <li>• 1 apple</li> </ul>	Calories: 290, total fat: 9g, saturated fat: 2.5g, cholesterol: 5mg, sodium: 150mg, total carbohydrate: 42g, dietary fiber: 4g, protein 14g

Source: Academy of Nutrition and Dietetics

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## Resource

Your Guide to Lowering your Cholesterol with TLC: [http://www.nhlbi.nih.gov/health/public/heart/chol/chol\\_tlc.pdf](http://www.nhlbi.nih.gov/health/public/heart/chol/chol_tlc.pdf).

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