

# Cholesterol

## What you can do to lower your level

### What is cholesterol?

*Cholesterol* is a type of fat made by your liver. Some cholesterol is in the food that you eat. Foods that come from animals—such as eggs, meat and dairy products—have cholesterol in them. Foods that come from plants don't have cholesterol. But it's not just the cholesterol in food that counts. Foods high in saturated fat can also raise your cholesterol level, because your liver turns saturated fat into cholesterol.

### Why is a high cholesterol level unhealthy?

While some cholesterol is needed for good health, too much cholesterol in your blood can raise your risk of having a heart attack or stroke.

The extra cholesterol in your blood may be stored in your *arteries* (large blood vessels) and cause them to narrow. Large deposits of cholesterol can completely block an artery, so the blood can't flow through.

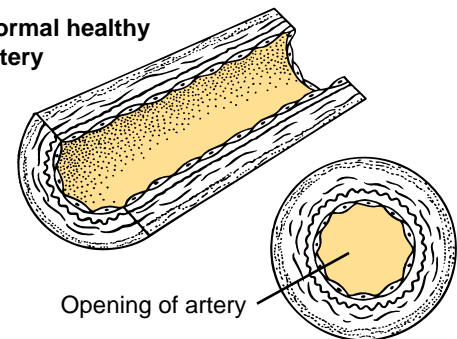
If an artery that supplies blood to your heart becomes blocked, a heart attack occurs. If an artery that supplies blood to your brain becomes blocked, a stroke occurs.

### When should I start having my cholesterol level checked?

Start having your cholesterol tested when you're about 20 years old. Children over two years old with a family history of heart disease before age 55 or a family history of high cholesterol (a level of 240 or more) should also have their cholesterol measured.

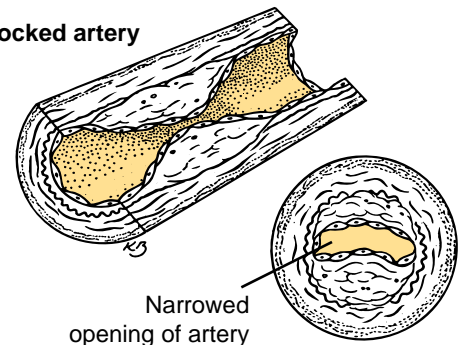
Have your cholesterol level checked at least every five years. Depending on what your cholesterol level is and what other risk factors for heart disease you have (see the box on page 2), you may need to have it checked more often. Talk to your family doctor about how often to be tested.

Normal healthy artery



Opening of artery

Blocked artery



Narrowed opening of artery

---

### **Other risk factors for heart disease**

- Having already had a stroke or heart attack
- Being a man 45 years of age or older
- Having a father or brother who had heart disease before he was 55 years old
- Being a woman 55 years of age or older, or being a woman under 40 and going through menopause without taking estrogen
- Having a mother or sister who had heart disease before she was 65 years old
- Smoking cigarettes
- Having high blood pressure or diabetes
- Having an HDL cholesterol level below 35
- Being very overweight
- Being inactive

### **What does my cholesterol level mean?**

Cholesterol travels through the blood in different types of packages called lipoproteins. *Low-density lipoproteins* (LDL) deliver cholesterol to the body. *High-density lipoproteins* (HDL) remove cholesterol from the bloodstream. This is why too much LDL cholesterol is bad for the body, while the HDL form is good. It's the balance between the different forms of cholesterol that tells you what your cholesterol level really means (see the box on page 3).

For example, if your total cholesterol level is high because of a high LDL level, you may be at higher risk of heart disease or stroke. If your total level is high only because of a high HDL level, you're probably not at higher risk.

### **What can I do to improve my cholesterol level?**

You can do a number of things to improve your cholesterol level. Eating healthy food can help lower your LDL cholesterol level, and a healthy diet may help protect you from the damaging effects of cholesterol. You can raise your HDL cholesterol level by quitting smoking if you smoke, losing weight if you're overweight and exercising.

Following a healthy diet usually lowers cholesterol levels. If healthy eating, exercising and other changes don't work after about six months, your family doctor may want to discuss using medicine to lower your cholesterol level. This may be a lifelong treatment, so it should be thought

---

about only if healthy habits don't work. Medicines used to treat cholesterol include *bile acid sequestering resins* (Colestid, Questran), *fibric acid derivatives* (Atromid-S, Lopid), *HMG-COA reductase inhibitors* (Mevacor, Pravachol, Zocor) and nicotinic acid (Nicobid, Nicolar).

### **Total cholesterol levels**

- Less than 200 is best.
  - Between 200 to 239 is borderline high.
  - 240 or more means you're at increased risk for heart disease.
- 

### **LDL levels**

- An LDL cholesterol level of less than 130 is best.
  - An LDL cholesterol level of 130 to 159 is borderline high.
  - An LDL cholesterol level of 160 or more means you're at higher risk for heart disease.
- 

### **HDL levels**

- An HDL cholesterol level of less than 35 means you're at higher risk for heart disease.
- An HDL cholesterol level of 60 or higher reduces your risk of heart disease.

---

## What sort of foods are healthy choices?

Lowering your cholesterol level by eating healthy foods is easier than you might think. It mostly takes a bit of common sense. You don't have to give up all your favorite foods. But you might need to eat them less often or sometimes replace them with healthier choices.

---

### Eat more of these

Fish; poultry without the skin; lean beef, pork and lamb  
Skim or low-fat milk  
Sherbet, sorbet, ice milk  
Egg whites  
Steamed vegetables  
Baked potatoes  
Clear soups  
Unsaturated vegetable oils: corn, canola, safflower, sesame, sunflower, olive, soybean  
Angel food cake  
Graham crackers, animal crackers, fig bars, vanilla wafers, lady fingers  
Pretzels, air-popped popcorn, bagels, English muffins  
Pancakes or cereal with skim milk  
Fruit

---

### Eat less of these

Sausage; organ meats (like liver)  
Whole milk  
Ice cream  
Egg yolks  
Buttered or fried vegetables  
French fries  
Creamed soups  
Saturated fats: butter, coconut oil, palm oil, lard, bacon fat  
Cheesecake  
Pastries, doughnuts  
Potato chips  
Eggs and bacon

---

## What should I look for on food labels?

It really helps to read the labels on foods. A label may say the food is low in cholesterol, but it could still be high in saturated fats. Look for these words on food labels to tip you off to high-fat foods: palm oil, palm kernel oil, coconut oil, partially saturated vegetable oil, hydrogenated vegetable oil.

---

## Tips for eating smart

- Eat more fruits and vegetables.
- Eat more broiled or grilled fish and skinless chicken.
- Choose lean cuts when you eat beef, pork and lamb. Also cut down on the size of the portion you eat.
- Eat a variety of fiber-rich foods, like oats, dark breads and apples. Fiber helps reduce cholesterol levels. It also helps you feel full.
- Limit saturated fats, like dairy fats (in ice cream and butter) and palm and coconut oil (in baked goods).
- Limit high-cholesterol foods, like egg yolks and organ meats (such as liver).
- Use low-fat dairy products.
- Eat no more than four egg yolks a week.
- Avoid fried foods.



For further information, write the National Cholesterol Education Program at the National Heart, Lung, and Blood Institute, National Institutes of Health, C-200, Bethesda, MD 20892.

This handout provides a general overview on this topic and may not apply to everyone. To find out if this handout applies to you and to get more information on this subject, talk to your family doctor.



*The American Academy of Family Physicians, one of the nation's largest medical specialty groups, is committed to promoting and maintaining high standards for family doctors—the doctors who give ongoing, comprehensive care to people of all ages.*

© 1992, 1996 American Academy of Family Physicians  
8880 Ward Parkway, Kansas City, MO 64114-2797  
<http://www.aafp.org>

Permission is granted to reproduce this material for nonprofit educational uses. Written permission is required for all other uses, including electronic uses.



This health education material has been favorably reviewed by the American Academy of Family Physicians Foundation.