

# Atherosclerosis

## “Hardening of the Arteries”: the Cholesterol Connection

Many people don't understand why cholesterol is so important to their health. After all, high cholesterol doesn't have any visible symptoms, so why do anything about it? The reason is simple: heart disease. Over the years, too much cholesterol in your blood can gradually build up in your arteries and reduce blood flow to your heart—and to your brain. The result can be a heart attack or a stroke.



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## Where Does Plaque Fit In?

This buildup of cholesterol and other materials—called plaque—is often called “hardening of the arteries.” For some people, a certain amount of plaque and hardening of the arteries comes with growing older. For others, the process is a slow, complicated one. Plaque buildup can start in childhood and worsen over time. The medical name is atherosclerosis (ath-er-o-skleh-RO-sis).

## What Causes Atherosclerosis?

No one knows exactly what causes this condition, but some experts think atherosclerosis begins when the inner wall of an artery, the *endothelium*, gets damaged. This damage might come from having high levels of cholesterol in the blood, from high blood pressure, or from cigarette smoke.

Gradually, plaque deposits made of fats, cholesterol, and other substances can build up in the artery wall. This buildup, in turn, can cause more deposits to build; the inner wall of the artery can become thicker and thicker. If the artery wall becomes thick enough, less blood and oxygen are supplied to the heart or the brain.

## Are There Symptoms?

If a clogged artery keeps the heart from getting enough blood and oxygen, you may feel chest pain or discomfort, called *angina*. A common condition (more than 6 million Americans have it), angina may not result in heart damage—but it is a sign of heart disease.

If an artery becomes blocked and blood to part of the heart is totally cut off, a heart attack occurs.

## Who Gets Atherosclerosis?

Research shows that there are three groups of people who have a higher risk than others of developing atherosclerosis.

- Males
- Females aged 55 or older
- People with a family history of early heart disease

The risk factors above can't be changed or controlled. However, other risk factors can be controlled to reduce the risk of atherosclerosis. These include

- High blood cholesterol (especially low-density lipoprotein [LDL], the "bad" cholesterol)
- Smoking
- High blood pressure
- Diabetes
- Obesity
- Lack of exercise

Talk with your doctor about the changes you *can* make to lessen your chances of developing atherosclerosis. Since high cholesterol has no symptoms, ask your doctor about having a blood test to check your cholesterol levels. If your levels are too high, lowering them can also lower your chances of developing heart disease or of having a heart attack.

## What Can You Do?

To bring down cholesterol levels, your doctor may recommend these steps.

- Eat a low-fat, low-cholesterol diet
- Lose weight if you're overweight
- Engage in regular physical activity\*
- Don't smoke



\*Consult your doctor before beginning any new physical activity.

# Remember

Some of the risk factors for atherosclerosis can't be changed, but you can do something about the other risk factors, including high blood cholesterol, smoking, obesity, and lack of exercise. Your doctor can help you make the healthy changes needed to reduce your risk of atherosclerosis.