

What is cholesterol?

Cholesterol is a type of waxy, fatty substance known as a *lipid*. It is made in the liver, and is also acquired through diet by eating animal products such as meat, eggs, and whole milk. Your body uses cholesterol to make hormones, cellular structures, vitamin D, and the bile acids that help to digest food. You only need a small amount of cholesterol and your liver makes all that is necessary, so unlike other nutrients it is not necessary to get cholesterol from your diet.

What is high cholesterol?

The amount of cholesterol in your blood is determined by a combination of your genes and your lifestyle. An unhealthy lifestyle such as being [overweight](#) , [smoking](#) , not getting enough exercise, and eating too much saturated fat and cholesterol can cause excess cholesterol to build up in your blood. This condition is known as high cholesterol, also called *hypercholesterolemia* or *hyperlipidemia* ("high-per-lih-pid-ee-mee-uh").

In women and men with high cholesterol, the excess cholesterol in the blood sticks to the walls of the arteries, coating them with a fatty buildup called *plaque* that gradually narrows and hardens the arteries in a process called

[atherosclerosis](#)

. High cholesterol increases your risk of all forms of artery disease, including

[PAD](#)

, [heart attack](#)

, and

[stroke](#)

If you have high cholesterol, keeping it under control with lifestyle changes and medications (if necessary) can help prevent PAD and reduce your risk of complications of heart and blood vessel disease.

What are the different types of cholesterol?

Total cholesterol refers to all of the cholesterol in the blood. Because cholesterol is fatty and blood is watery, the two do not mix. Cholesterol is carried in the blood by ball-shaped shells called *lipoproteins*. There are two main types of lipoproteins that carry cholesterol:

- **High-density lipoprotein**, or HDL cholesterol, is the "good" kind. It moves easily through the blood and does not stick to the artery walls. HDL helps prevent PAD by carrying cholesterol away from the arteries to the liver to be removed from the body. Think "H" for healthy—with HDL cholesterol, a high level is good.
- **Low-density lipoprotein**, or LDL cholesterol, is the "bad" kind. It tends to stick to the lining of the artery walls, leading to fatty plaque buildup. A high level of LDL cholesterol increases your risk for heart and blood vessel disease.

Triglycerides are another type of fat (or lipid) found in the blood that increases your risk of heart and blood vessel disease when present in high amounts.

See [What do my cholesterol numbers mean?](#) to learn about healthy levels of the different types of cholesterol.

How does high cholesterol affect my risk of developing PAD?

High levels of total cholesterol and LDL ("bad") cholesterol and low levels of HDL ("good") cholesterol increase your risk of developing heart and blood vessel disease, including PAD. Two out of every three women with PAD have high cholesterol, yet less than half of women realize that high cholesterol puts them at risk.^{1,2}

Overall, research has shown that each 10-point rise in total cholesterol increases a person's risk of developing PAD by 5% to 10%.^{3,4} However, in most of the early cholesterol studies, results were not analyzed separately in women. Recent women-only studies have suggested that

having high HDL ("good") cholesterol levels may be the most important for women. Each 5-point rise in HDL cholesterol lowers PAD risk by about 10%, even after other PAD risk factors are taken into account.^{3,5}

The Women's Health Study followed 27,935 female health professionals for 12 years. Women with high levels of HDL cholesterol were 60% less likely to develop PAD than women with low levels. Women who had a high ratio of total cholesterol to HDL cholesterol (meaning they had too much total cholesterol for their HDL cholesterol to handle) were more than twice as likely to develop PAD.⁶ In this study, other types of cholesterol did not affect a woman's PAD risk.

Likewise, the HERS study of 2,763 women with heart disease found that good HDL cholesterol levels made women less likely to need a procedure to treat PAD, including [PAD in the legs](#), [aortic disease](#)

, [carotid artery disease](#)

, and

[kidney artery disease](#)

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How often should I have my cholesterol tested?

High cholesterol alone does not cause any symptoms, so it is important to have your cholesterol tested regularly.

Everyone 20 years of age and older should have their cholesterol level measured at least once every 5 years. If your levels are high, or you are at high risk for PAD because of other risk factors, you should be tested at least every 2 years.⁸ If you are already on a stable dose of a statin medication, you should have liver function tests and a cholesterol panel every six months.

[Click here](#) to learn more about the different kinds of tests for high cholesterol.

Can lowering cholesterol help prevent PAD?

Few studies have examined whether lowering cholesterol can prevent PAD, especially in women. One study of 4,444 patients (only 19% were women) with heart disease and high cholesterol found that statin drugs reduced the risk of developing a *carotid bruit* (a sign of [carotid artery disease](#)), and cut the risk of developing *intermittent claudication* (a sign of [PAD in the legs](#)) by nearly 40%.⁹

However, there were not enough women in the study to determine if women experienced the same benefits as men.

Despite the lack of evidence in PAD, it is well known that controlling high cholesterol can slow the buildup of fatty plaque that causes artery disease. All women should maintain healthy cholesterol levels to reduce the risk of heart and blood vessel disease, including PAD.¹⁰

Women should have an HDL cholesterol level of 50 or more, ideally 60 or more; the higher the better. See [What do my HDL cholesterol numbers mean?](#)

Your LDL cholesterol target depends on your overall risk for heart and blood vessel disease: the higher your risk, the lower your LDL goal should be. See [How low should my LDL cholesterol be?](#) to find out your target numbers.

Cholesterol-lowering with statin drugs is also part of the standard treatment for women who have been diagnosed with PAD. Lowering cholesterol reduces [PAD symptoms](#), and can prevent complications like heart attack and stroke.

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All women with PAD should take a statin drug and aim to get their LDL cholesterol level below 100 mg/dL.

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Some high-risk women may benefit from lower goals or additional drugs.

Learn More:

[How is high cholesterol treated?](#)

[Statin drugs to treat PAD](#)

[PAD Treatment Overview](#)

References

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