



# Causes, Diagnosis and Treatment of Health Issues Caused By High Cholesterol

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Cholesterol is a waxy, fat-like molecule found in all of your body's cells. Cholesterol is required by your body for the production of hormones, vitamin D, and chemicals that aid digestion. Your body produces all of the cholesterol that it requires. Cholesterol can also be found in animal-based meals including egg yolks, meat, and cheese. If you have too much cholesterol in your blood, it can form plaque when it combines with other molecules in your blood. Plaque adheres to the inner surfaces of your arteries. Atherosclerosis is the accumulation of plaque. It can cause coronary artery disease, in which your coronary arteries constrict or become completely clogged.

### Cholesterol's causes

- Unhealthy eating habits, such as consuming excessive amounts of unhealthy fats. Saturated fat, for example, can be found in meats, dairy products, chocolate, baked goods, as well as deep-fried and processed foods. Another type of fat is trans-fat, which can be found in fried and processed meals. These fats can cause your LDL (bad) cholesterol to rise.
- Lack of physical activity, owing to excessive sitting and insufficient exercise. Your HDL (good) cholesterol is reduced as a result of this.
- Smoking, this reduces HDL cholesterol in men and women alike. It also boosts LDL cholesterol levels.

Genetics may also have a role in high cholesterol levels. For example, familial hypercholesterolemia (FH) is an inherited form of high cholesterol.

### What health issues can be caused by high cholesterol?

If your arteries are clogged with plaque, a patch of plaque can rupture (break open). This can result in a blood clot forming on the plaque's surface. A clot can partially or fully stop blood flow in a coronary artery if it becomes large enough.

Angina (chest pain) or a heart attack can occur when the supply of oxygen-rich blood to your heart muscle is limited or blocked. Other arteries in your body, such as those that supply oxygen-rich blood to your brain and limbs, can also develop plaque. Carotid artery disease, stroke, and peripheral arterial disease can all result from this.

### For those under the age of 19 years old

- Some children may have this test starting at age 2 if there is

a family history of high blood cholesterol, heart attack, or stroke.

### For people over the age of 20

- Tests for younger adults should be done every 5 years.
- It should be done every 1 to 2 years for men 45 to 65 and women 55 to 65.

### Diagnosis

A lipid panel, often known as a lipid profile, is a blood test that checks cholesterol levels.

Cholesterol total

LDL cholesterol (low-density lipoprotein)

HDL cholesterol (high-density lipoprotein)

Triglycerides are a form of blood fat.

### Treatment

The prescription or combination of medications you choose is determined by a number of criteria, including your unique risk factors, age, health, and potential drug adverse effects. Among the most popular options are;

**Resins that bind bile acids:** Cholesterol is used by the liver to produce bile acids, which are essential for digestion. By binding to bile acids, the drugs cholestyramine (Prevalite), colestevlam (Welchol), and colestipol (Colestid) decrease cholesterol indirectly. This causes your liver to use excess cholesterol to produce more bile acids, lowering cholesterol levels in your blood.

**Bempedoic acid:** Bempedoic acid is a kind of benzoic acid. This newer medicine works similarly to statins but has a lower risk of causing muscle soreness. Adding bempedoic acid (Nexletol) to a high-dose statin can considerably cut LDL. There is also a combo pill (Nexlizet) that contains both bempedoic acid and ezetimibe.

**Inhibitors of PCSK9:** These medicines can aid in the absorption of LDL cholesterol by the liver, lowering the quantity of cholesterol in your blood. People with a hereditary disorder that causes very high levels of LDL or people with a history of cardiovascular disease who have intolerance to statins or other cholesterol drugs may benefit from alirocumab (Praluent) or evolocumab (Repatha).

### Medications for triglyceride levels that are too high

• Niacin inhibits the production of LDL and VLDL cholesterol in the liver. However, niacin has no added benefits over statins. Because niacin has been related to liver damage and strokes, most doctors now only recommend it to those who are unable to take statins.

• Supplements containing omega-3 fatty acids. Supplementing with omega-3 fatty acids can help you decrease your triglycerides. They can be obtained through a prescription or over-the-counter. If you decide to take over-the-counter supplements, be sure you seek your doctor's approval first. Supplementing with omega-3 fatty acids may interact with other medications you're taking.

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### **Home remedies and a healthy lifestyle**

- Eat a diet that is good for your heart. Plant-based diets, such as fruits, vegetables, and whole grains, should be prioritised. Saturated and Trans fats should be avoided. Olive and canola oils include monounsaturated fat, which is a healthier option. Avocados,

almonds, and oily salmon are among more healthy fat sources.

- Never, ever find a way to stop smoking if you do.
- Exercise on a regular basis. Work up to at least 30 minutes of moderate intensity exercise five times a week with your doctor's approval.

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