

Controlling Cholesterol with Statins

When it comes to keeping your heart healthy, what foods you eat and the genes you inherit matter. Good heart health also may depend on the drugs you take. Several medicines are effective at lowering blood cholesterol levels—a key factor in good heart health. Chief among them are the statins.



Getty Images

Lovastatin

Pravastatin

Simvastatin

Fluvastatin

Atorvastatin

Rosuvastatin

Statins (HMG-CoA reductase inhibitors) are one class of many drugs used to lower the level of cholesterol in the blood by reducing the production of cholesterol by the liver. Statins block the enzyme in the liver that is responsible for making cholesterol. Too much cholesterol can increase a person's chance of getting heart disease. According to the Centers for Disease Control and Prevention, heart disease is the leading cause of death for both women and men in the United States.

Understanding Cholesterol

Cholesterol is a waxy substance found in all parts of the body. It is critical to the normal function of all cells. The body needs cholesterol for making hormones, digesting dietary fats, building cell walls, and other impor-

tant processes. Your body makes all the cholesterol it needs, but cholesterol is also in some of the foods you eat.

When there is too much cholesterol in your blood, it can build up on the walls of the arteries (blood vessels that carry blood from the heart to other parts of the body). This buildup is called plaque. Over time, plaques can cause narrowing or hardening of the arteries—a condition called atherosclerosis. In short, too much cholesterol can clog your arteries and keep your heart from getting the blood it needs.

Cholesterol Numbers That Matter

There are no warning symptoms of high cholesterol. But a simple blood test by your doctor will measure the different kinds of cholesterol.

When diet and exercise alone are not enough to reduce cholesterol to goal levels, doctors often prescribe medication—the most prominent being the statins.

Low-density lipoprotein (LDL) or “bad” cholesterol can clog the arteries. Lower numbers of LDL are best. The higher the LDL level, the greater the risk for heart disease.

High-density lipoprotein (HDL) or “good” cholesterol carries bad cholesterol out of your blood, back to the liver, where it can be eliminated, to keep it from building up in the arteries. The higher the HDL level, the lower the risk for heart disease.

For information on what your cholesterol numbers mean, visit www.nhlbi.nih.gov/health/public/heart/cholesterol/wyntk.htm#numbers

What Affects Cholesterol?

The following factors affect blood cholesterol levels:

- **Certain foods** - eating too much saturated fat, found mostly in animal products, and too much cholesterol, found only in animal products
- **Heredity** - genes play a role in influencing the levels
- **Weight** - excess weight tends to increase the levels
- **Exercise** - regular physical activity may not only lower LDL cholesterol, but it may increase the level of desirable HDL cholesterol
- **Smoking** - cigarette smoking lowers HDL cholesterol
- **Age and gender** - cholesterol levels naturally rise as men and women age. Menopause is often associated with increased LDL cholesterol in women.

State of the Statins

The main goal of cholesterol treatment is to lower LDL to levels that will not lead to or worsen heart disease. When a patient without heart dis-

ease is first diagnosed with elevated blood cholesterol, the National Cholesterol Education Program guidelines advise a six-month program of reduced dietary saturated fat and cholesterol, together with physical activity and weight control, as the primary treatment to bring levels down.

When diet and exercise alone are not enough to reduce cholesterol to goal levels, doctors often prescribe medication—the most prominent being the statins. By interfering with the production of cholesterol, statin medications can slow the formation of plaques in the arteries.

Statins are relatively safe for most people, but some can respond differently to the drugs. Certain people may have fewer side effects with one statin drug than another. Some statins, in particular Lovastatin and Simvastatin, also are known to interact adversely with other drugs. This information, coupled with the degree of cholesterol-lowering desired, will help guide the decision about which statin to use, or whether another type of drug should be used.

Statin medications (HMG-CoA reductase inhibitors)

- work in the liver to prevent formation of cholesterol
- are effective in lowering bad cholesterol levels and raising good cholesterol
- are not recommended for pregnant patients or those with active or chronic liver disease
- can cause serious muscle problems

Currently available statins

- Lovastatin (Mevacor, Altoprev)
- Pravastatin (Pravachol)

- Simvastatin (Zocor)
- Fluvastatin (Lescol)
- Atorvastatin (Lipitor)
- Rosuvastatin (Crestor)

Tips for Consumers

- Have your blood cholesterol levels checked at least once every 5 years if you are an adult 20 years or older.
- Check with your doctor. You may be able to lower your cholesterol levels by eating better and exercising more.
- Maintain a healthy weight. Being overweight increases your risk for heart disease.
- Stay active every day.
- Use the food label to choose foods lower in saturated fat, including trans fats, and calories.
- Eat more fruits and vegetables.
- Don't stop taking any cholesterol-lowering medications you may be on without first talking to your doctor. [FDA](#)

For More Information

National Heart, Lung, and Blood Institute Health Information Center
www.nhlbi.nih.gov/health/infectr/index.htm

FDA's Center for Drug Evaluation and Research
www.fda.gov/cder/index.html