

Treatment of High Cholesterol

Cholesterol is a **lipid** (fat) that is necessary for our bodies to function. Higher than normal levels of cholesterol in the blood can cause damage to blood vessels by accumulating in the vessel and forming **plaques** that can obstruct or block blood flow and cause narrowing of the blood vessels. High cholesterol (**hypercholesterolemia**) increases the risk of heart disease and stroke. Other factors that increase risk of heart disease are smoking, high blood pressure, diabetes, being overweight, older age, and having a family member who had a heart attack at a young age. The May 12, 2004, issue of *JAMA* includes an article about treating high cholesterol levels in women.

High cholesterol itself does not cause any symptoms, so it is important to have your cholesterol level checked. The choice of treatment depends on the level of a person's risk for heart disease in addition to cholesterol level. There are several options for treating high cholesterol that you should discuss with your doctor.

LIFESTYLE MODIFICATIONS

- Eating a diet rich in fruits and vegetables, low in saturated fats, and low in total fat content can help to lower cholesterol to healthful levels.
- Engaging in regular exercise for at least 30 minutes each day lowers cholesterol levels and prevents type 2 diabetes, lowers risk of heart disease, and reduces or maintains weight. Regular physical activity (such as walking) is a cornerstone of treatment for high cholesterol and related health problems.
- Losing excess body weight can lower cholesterol levels. Controlling weight by reducing caloric intake and introducing daily exercise has many beneficial effects, including reducing risk for diabetes, heart attack, and some cancers.
- Stopping smoking is important because tobacco products damage blood vessels, making it easier for cholesterol to form plaques.

STATIN MEDICATIONS

Medications called **statins** work in the liver to block production of cholesterol. These medications are effective in reducing cholesterol levels, but the levels go up again if the medicine is stopped. These medicines can have adverse effects that require attention. Liver damage can occur, as well as muscle damage called **myopathy**. Regular laboratory examinations may be required to check for liver damage. Any muscle pain or weakness that develops while taking a statin medication must be reported immediately to your doctor. Women who are pregnant or nursing should not take statin medications.

OTHER MEDICATIONS

Sequestering medications (also called **binding agents**) combine with bile acids in the intestine. This process makes less cholesterol available to go into the bloodstream.

FOR MORE INFORMATION

- National Heart, Lung, and Blood Institute
www.nhlbi.nih.gov
- American Heart Association
800/242-8721
www.americanheart.org

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. Many are available in English and Spanish. A Patient Page on cholesterol and atherosclerosis was published in the May 16, 2001, issue; one on cholesterol was published in the January 13, 1999, issue; and one on risk factors for heart disease was published in the August 20, 2003, issue.

Sources: National Heart, Lung, and Blood Institute; American Heart Association

Janet M. Torpy, MD, Writer

Cassio Lynn, MA, Illustrator

Richard M. Glass, MD, Editor

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