Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

About Hypercholesterolemia (High Cholesterol)

This information explains what hypercholesterolemia (HY-per-koh-LES-teh-rol-EE-mee-uh) is and how to treat it. It also explains cholesterol and the different types found in your body.

What is hypercholesterolemia?

Hypercholesterolemia happens when you have high levels of lipids (fats) or cholesterol in your blood. This can narrow or block your arteries. It can also raise your risk for cardiovascular (KAR-dee-oh-VAS-kyoo-ler) disease (CVD).

CVD is disease of the heart or blood vessels, such as:

- Heart attack.
- Stroke.
- Peripheral vascular (peh-RIH-feh-rul VAS-kyoo-ler) disease. This is when you have fatty deposits in your blood vessels.

What is cholesterol?

Cholesterol is a waxy type of fat your liver makes. It is found in your blood and cells. It is also found in certain foods. Your body uses cholesterol to make up cells, tissues, and hormones.

Too much cholesterol can stick to the walls of your arteries and cause them to harden. This can raise your risk of CVD.

There are different types of cholesterol:

- **Low-density lipoprotein (LDL) cholesterol** is also known as "bad cholesterol." High levels of LDL cholesterol can raise your risk of heart disease and stroke. Foods that raise your LDL levels include red meat and fried foods.
- **High-density lipoprotein (HDL) cholesterol** is also known as "good cholesterol." High levels of HDL cholesterol can lower your risk of heart disease and stroke. Foods that raise your HDL levels include oats, legumes, nuts, and berries.
- **Triglycerides** (tri-GLI-ser-idez) are a type of fat found in your blood. They are usually measured with cholesterol levels. High levels of triglycerides raise your risk of heart disease and stroke. Foods that raise your triglycerides include egg yolks and butter.

How to get tested for hypercholesterolemia

You'll need a blood test to find out your cholesterol and triglyceride levels. This test must be done on an empty stomach. You must not eat or drink anything but water for 9 to 12 hours before the blood test. Ask your healthcare provider how long you should fast (not eat or drink) before your test.

Cholesterol and lipid levels are measured in milligrams per deciliter (mg/dL) of blood. You may have hypercholesterolemia if these levels are higher than their recommended ranges:

- **LDL cholesterol:** 130 mg/dL or lower.
- **HDL cholesterol:** 40 mg/dL or higher.
- **Triglycerides:** 150 mg/dL or lower.

The recommended levels may be lower if you have diabetes. If you have heart disease, your healthcare provider may recommend different levels.

How to treat hypercholesterolemia

Lifestyle changes

- Maintain a healthy body weight.
- Eat a healthy diet, including lots of fruits and vegetables. These can help lower your cholesterol.
- Avoid foods with a lot of saturated fat, such as red meat, butter, fried foods, and cheese. For more information about eating healthy, read *Eat Your Way to Better Health* (www.mskcc.org/pe/eat-better-health). You can also talk to a clinical dietitian nutritionist about your diet.
- MSK has specialists who can help you quit smoking. For more information about our Tobacco Treatment Program, call 212-610-0507. You can also ask your healthcare provider about the program.
- Be active for at least 30 minutes each day, if you're able to. This includes activities such as walking, biking, or gardening. Talk with your healthcare provider if you need a referral for a physical therapist.

Medication

There are many types of medication you can use to treat hypercholesterolemia. These medications work in different ways:

- **Statins** lower the amount of LDL cholesterol your body makes. Examples of statins are atorvastatin (Lipitor®) and rosuvastatin (Crestor®).
- **Ezetimibe** (Zetia®) reduces the amount of LDL cholesterol that your body absorbs.
- **PCSK9 inhibitors,** such as evolocumab (Repatha), are medications that lower your LDL cholesterol. Your healthcare provider may recommend these if you cannot take statins or ezetimibe. They may also recommend these if statins or ezetimbibe do not work for you.
- **Bile acid sequestrants** lower the amount of LDL cholesterol that your intestines (gut) absorb from food. One example is cholestyramine (Locholest®, Prevalite®).

- **Fibrates** lower your triglyceride levels and raise your HDL levels. One example is gemfibrozil (Lopid®).
- **Nutritional supplements**, such as fish oil and soy protein, may also help lower your cholesterol. Talk with your healthcare provider before taking any dietary supplements.

These medications are some examples, but there are others. Your healthcare provider will talk with you about which medications are right for you. This will depend on your age, cholesterol levels, and other conditions you may have.

If you have any questions or concerns, talk with your healthcare provider.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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