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Depression  
Diabetes (Type 2)  
Heart Failure  
High Blood Pressure  
Osteoporosis

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# Know Your Medicines

## Cholesterol



THE PETER LAMY CENTER  
for Drug Therapy and Aging  
THE UNIVERSITY OF MARYLAND

## High Cholesterol

High cholesterol is a common problem affecting one in five adults. More than half of all adults have high levels, which can lead to heart disease—the number one cause of death.

There are no noticeable symptoms, but your doctor can do a simple blood test to measure your cholesterol level. Understanding your test results and making adjustments in your lifestyle can help you live longer.

## What is Cholesterol?

Cholesterol is a soft, waxy substance made by the liver and found in the bloodstream. It is also in many foods—often in high levels. As a part of normal body function, cholesterol aids digestion and helps keep you free from infection.

However, too much cholesterol can be harmful. It can form plaques and pockets of silt in your arteries that slow your blood flow. Plaque buildup can eventually block your arteries, causing a heart attack.

- Take your medicine as directed. Always ask your doctor or pharmacist for more information about your medicines. The more you know about your medicines, the better they will work for you.

## When Taking Your Medicine...

### **ALWAYS**

- Take your medicine exactly the way your doctor prescribes it—no more and no less.
- Call your doctor immediately if you have any problems with your medicines.
- Make sure you received the correct medicine before you leave the pharmacy. If not, notify the pharmacist.

### **DO NOT**

- Stop taking a prescription drug unless your doctor says it's OK—even if you are feeling better. If you are worried that the drug might be doing more harm than good, talk with your doctor. He or she may be able to change your medicine to another one that will work just as well.

## Monitoring Your Condition

Whenever you start a new medicine (and at certain times during treatment) it is important to have your cholesterol levels tested. Make sure the test measures total cholesterol, LDL, HDL, and triglycerides. Some medicines also require tests to check your liver function and blood sugar.

### It is important to...

- Know your numbers: your current cholesterol levels and your LDL cholesterol goal.
- Ask your doctor and get advice on reaching your goal.
- Eat and exercise responsibly.



## How Do I Know If I Have High Cholesterol?

The only way to know if your cholesterol levels are too high is to be tested. All adults should be tested at least every five years. See your doctor, or look for a local cholesterol screening at health fairs or pharmacies.

*For the most accurate test results, don't eat for 12 hours before you are tested.*

### Risk Factors

Several factors, combined with high cholesterol, can increase your risk of heart disease.

#### Age

- Men over 45 are at greater risk
- Women over 55 are at greater risk

#### Family history

- If your mother or sister had a heart attack before age 65
- If your father or brother had a heart attack before age 55

#### Smoking

#### High blood pressure

#### Diabetes



## What Do My Test Results Mean?

There are four numbers you need to know:

- Total cholesterol
- LDL cholesterol
- HDL cholesterol
- Triglycerides

Each tells you and your doctor something about your risk of heart disease and what options you have for controlling your cholesterol levels.

### **Total Cholesterol**

Total cholesterol is the number you are most likely to receive from your test. It is the measure of how much cholesterol is in your blood: LDL, HDL, and triglycerides.

A high number—above 240 mg/dL—means a greater risk of heart disease. Total cholesterol lower than 200 mg/dL is ideal.

Your test results and risk factors may indicate that you and your doctor should look at your LDL and HDL cholesterol.

### **Bile Acid Sequestrants**

These medicines help lower cholesterol levels by binding with cholesterol in the intestines and eliminating it.

<b>Generic Name</b>	<b>Brand Name</b>
colestipol	Colestid
cholestyramine	Questran

### *Side Effects*

These medicines can cause constipation, bloating, and nausea. They also can prevent other medicines from working properly. Ask your pharmacist about potential drug interactions.

### **Niacin**

Niacin decreases the body's production of cholesterol. It must be used in high doses on a regimen prescribed by your doctor.

### *Side Effects*

A common side effect of niacin therapy is feeling flushed (redness and skin feeling hot). To relieve this, take a regular strength (325 mg) aspirin half an hour before taking your niacin.

## Statins (HMG Co-A Reductase Inhibitors)

These new medicines help reduce the amount of cholesterol the body produces naturally. Because the body makes most of its own cholesterol at night, these medicines should be taken in the evening. If you are not sure when to take your medicine, ask your pharmacist.

Generic Name	Brand Name
atorvastatin	Lipitor
cerivastatin	Baycol
fluvastatin	Lescol
lovastatin	Mevacor
pravastatin	Pravachol
simvastatin	Zocor

### *Side Effects*

These medicines may cause muscle weakness or pain, and it is important for your doctor to test your liver function.

## Fibric Acid Derivatives

These medicines have been used for years. They lower high triglyceride and cholesterol levels.

Generic Name	Brand Name
gemfibrozil	Lopid
clofibrate	Atromid-S
fenofibrate	Tricor

### *Side Effects*

Side effects can include abdominal pain or nausea, constipation, and rash.

## LDL Cholesterol

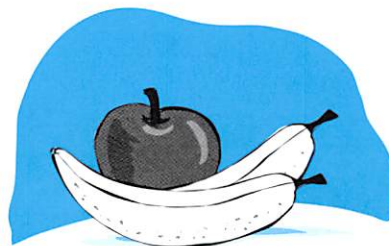
LDL (low density lipoprotein) is often called “bad cholesterol.” It’s the component of your blood that carries cholesterol to cells, where it is needed to make steroids and hormones. Too much LDL, however, leads to plaque buildup and increases your risk of heart disease.

Your risk factors determine your ideal LDL level: usually lower than 130 or 160 mg/dL. If you have heart disease, your ideal level is lower than 100 mg/dL.

## HDL Cholesterol

HDL (high density lipoprotein) is often called “good cholesterol.” It also carries cholesterol, but it takes it to the liver, where it is broken down. High levels of HDL can protect against heart attacks and stroke.

An HDL level higher than 35 mg/dL is ideal, but your risk of heart disease goes down when your HDL is higher than 60. A level lower than 35 mg/dL means your HDL is too low.



## Triglycerides

Like cholesterol, triglycerides are a lipid found in the bloodstream. They are carried by another type of lipoprotein, VLDL. Although the connection between high triglycerides, high VLDL, and heart disease is not clear, treating high triglycerides has decreased the risk of heart disease for some patients.

A triglyceride level lower than 200 mg/dL is ideal. A level between 200 and 400 mg/dL is borderline.

## Taking Responsibility for Your Health

If you have high cholesterol, consider changing your lifestyle through proper nutrition and physical activity before you consider medicines.

*Proper nutrition* is an important part of healthy living. The cholesterol you get from food is found in animal products: meats, eggs, oils, and dairy products. Fruits, vegetables, nuts, and grains do not contain any cholesterol.

The American Heart Association recommends a diet that limits cholesterol to fewer than 300 mg a day. Eating more fruits and vegetables and less meat, dairy products, and high-fat foods should help lower your cholesterol levels. Check the cholesterol on food labels and choose low-cholesterol salad dressings and butter substitutes.

*Physical activity* can increase your HDL (good cholesterol) and decrease your LDL (bad cholesterol). By strengthening your heart and muscles, aerobic exercise—walking, biking, swimming—can improve your overall health. Talk to your doctor before starting an exercise program.

## Which Medicines Help?

If diet and exercise are not enough to reduce your cholesterol levels, your doctor may prescribe one of many types of cholesterol-lowering medicines.

Taking your medicine exactly as directed by your doctor is critical for your treatment to be successful. If you have problems with side effects, contact your doctor or pharmacist before making any change in your regimen.

