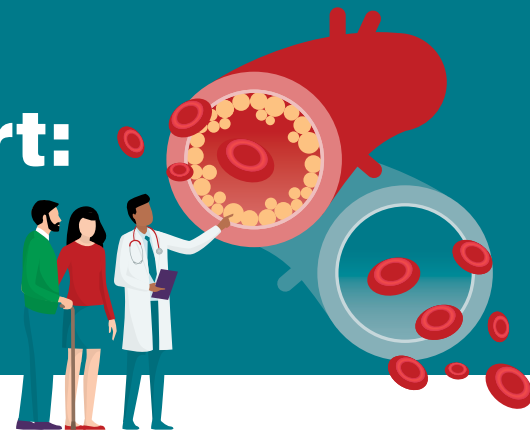


# Cholesterol & Your Heart: What You Need to Know



## Learn more about

**1** Why your cholesterol levels matter.

**2** What healthy cholesterol levels are.

**3** What to do if you have high cholesterol.

## What is cholesterol?

Cholesterol is a waxy, fat-like substance in your cells. Our bodies generally make all the cholesterol needed for good health. Cholesterol helps make hormones, vitamin D, and substances to help you digest foods.

Small packages, called **lipoproteins**, carry cholesterol through your bloodstream. Two kinds of lipoproteins carry the cholesterol. You may have heard about “good” and “bad” cholesterol. **High-density lipoprotein (HDL)** is the “good” cholesterol. **Low-density lipoprotein (LDL)** is the “bad” cholesterol.



**HDL** helps your body get rid of cholesterol so it doesn't clog your arteries. High levels of HDL may lower your risk of a heart attack, stroke, and other health problems.



**LDL** deposits cholesterol inside the blood vessels that carry blood to your heart and other parts of your body. Over time, this may cause your arteries to narrow or get blocked, which can cause a heart attack, stroke, or other health problems.



**Triglycerides** are a type of fat in your blood that your body uses for energy. A combination of high triglyceride and low HDL levels can increase your risk for heart attack and stroke.

Unhealthy cholesterol levels can harm your heart health. Undiagnosed or untreated high LDL or “bad” cholesterol can lead to serious problems, such as heart attack and stroke. That’s why it’s important to take steps to get and keep your cholesterol in a healthy range.

### Heart-healthy lifestyle changes can help you control your cholesterol:

- Be physically active
- Eat a heart-healthy diet
- Aim for a healthy weight
- Quit smoking or vaping
- Reduce stress
- Get enough good-quality sleep

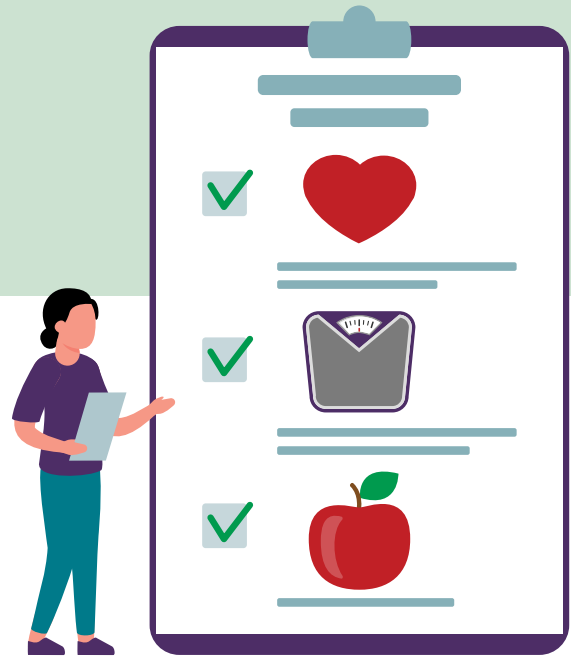


## Am I at risk for high cholesterol?

The following factors increase your likelihood of having unhealthy cholesterol levels.

**Some you can change, and others you can't:**

- **Your lifestyle**, including diet, smoking, stress, alcohol consumption, and physical activity levels, affect cholesterol levels.
- **A family history of high cholesterol** may mean your body has more difficulty removing or breaking down LDL or "bad" cholesterol because of changes in genes. Be sure to tell your healthcare provider of any family history.
- **Your race or ethnicity** may affect your risk of having unhealthy cholesterol levels.
  - » Overall, white people are more likely than other groups to have high levels of total cholesterol.
  - » Asian Americans, including those of Indian, Filipino, Japanese, and Vietnamese descent, are more likely to have high levels of LDL or "bad" cholesterol than other groups.
  - » Hispanic Americans are more likely than others to have lower levels of HDL or "good" cholesterol.
  - » African Americans are more likely to have high HDL levels. However, they are more likely to have other risk factors, such as high blood pressure, obesity, or diabetes, which may overcome the benefits of higher HDL levels.
- **Your age.** Normal age-related changes in the body may increase LDL or "bad" cholesterol. High LDL levels are most commonly diagnosed in 40- to 59-year-olds. Younger people, including children and teens, can have high LDL but it's less common.
- **Your sex** matters also. Men are more likely than women to have unhealthy cholesterol levels, but women's risk goes up after menopause. Being pregnant may also alter your cholesterol.
- **Having obesity** can raise your LDL and lower your HDL levels.
- **Certain medical conditions** may raise your LDL and lower your HDL levels. These include chronic kidney disease, diabetes, HIV infection, hypothyroidism, lupus, multiple myeloma, polycystic ovary syndrome, and sleep apnea.
- **Medicines** you take for other health problems can raise your LDL or lower your HDL levels.



# How do I know if I have high cholesterol?

There are usually no symptoms of high cholesterol. Many people don't know they have it until their healthcare provider does a routine blood test to check. When and how often you should get this test depends on your age, risk factors, and family history.



## The general recommendations for cholesterol testing are below.

### For people age 19 or younger:

- The first test should be between the ages of 9 to 11
- Children should get the test again every 5 years
- Some children may get this test starting at age 2 if there's a family history of high cholesterol, heart attack, or stroke.

### For people age 20 or older:

- Younger adults – every 5 years
- Men ages 45 to 65 – every 1 to 2 years
- Women ages 55 to 65 – every 1 to 2 years
- People over age 65 – every year



You may need to get your cholesterol checked more often if you have heart disease or diabetes or a family history of high cholesterol. If you have unhealthy cholesterol levels, you'll need to have it tested more often. Talk with your doctor to find out how often is best for you.

## Getting a cholesterol test

You can get a blood test to measure your cholesterol levels at a health clinic, healthcare provider's office, or a screening event like a health fair. Many screening sites measure only total cholesterol. It's important to look at all types of cholesterol in your blood and not just your total cholesterol number. So follow up with a healthcare provider for a blood test called a complete lipid profile. You may need to fast for 9 to 12 hours before getting it done.

## A lipid profile tells you the levels of each type of fat in your blood, including:

- Total cholesterol
- HDL "good" cholesterol
- LDL "bad" cholesterol
- Triglycerides

## Understanding cholesterol numbers\*

Talk with your healthcare provider about what all your lipid numbers should be for you. Your numbers may depend on your age, race, blood pressure, weight, family history, and more. However, here are some general guidelines:

### Desirable cholesterol numbers for adults

Total cholesterol	Less than 200 mg/dL*
LDL "bad" cholesterol	Less than 100 mg/dL
HDL "good" cholesterol	Greater than or equal to 60 mg/dL
Triglycerides	Less than 150 mg/dL

\*Cholesterol levels are measured in milligrams (mg) of cholesterol per deciliter (dL) of blood.

LDL cholesterol causes clogged arteries, so lower levels are better. Since HDL cholesterol protects against heart disease, higher numbers are better. HDL levels of 60 mg/dL or more help to lower your risk for heart disease. A level less than 40 mg/dL for men and 50 mg/dL for women is low. It increases your risk of developing heart disease. You may need treatment if your triglyceride levels are borderline high (150-199 mg/dL) or high (200 mg/dL or more).

# How is high cholesterol treated?

The main goal in treating high cholesterol is to lower your LDL or "bad" cholesterol level. Studies prove that lowering LDL can slow, stop, or even reverse the buildup of plaque, which is a deposit of cholesterol and other substances in your arteries. Plaque can narrow your arteries. Limiting plaque can help prevent heart attacks, strokes, and death from heart and blood vessel diseases.



## Live a heart-healthy lifestyle

Key to having healthy cholesterol levels is a healthy lifestyle. **Begin making the following changes in your daily life:**

### Eat heart-healthy

What you eat greatly affects your cholesterol levels. Adopting a heart-healthy eating plan can help keep levels in a healthy range. The **Therapeutic Lifestyle Changes (TLC) program** uses diet, physical activity, and weight management to lower cholesterol. Other ways of eating, like the Mediterranean diet or the **Dietary Approaches to Stop Hypertension (DASH) eating plan**, are also good options for your heart. DASH was developed to lower high blood pressure, but studies show that following it also improves cholesterol levels.

Both the Mediterranean diet and DASH encourage eating whole grains, fruits, and vegetables rather than refined carbohydrates such as sugar. They recommend limiting saturated fats found in fatty cuts of meat, dairy products, coconut oil, palm kernel oil, and palm oil. Eating fish high in omega-3 fatty acids, nuts, and certain vegetable oils such as olive oil is also encouraged. Talk to your doctor about other nutritional changes that you can make.



### Be physically active

Physical activity can help lower LDL or "bad" cholesterol and triglycerides and raise HDL or "good" cholesterol. Before starting any exercise program, ask your doctor what level of physical activity is right for you. Generally, 2½ hours or 150 minutes of weekly physical activity is recommended for adults. Start small and work your way up.

### Manage Stress

Research has shown that chronic stress can sometimes increase LDL or "bad" cholesterol and decrease HDL or "good" cholesterol levels.

### Quit Smoking

Smoking lowers HDL, particularly in women, and raises LDL. To protect your heart, avoid exposure to secondhand smoke and quit smoking or vaping. For free help and support to quit, visit [smokefree.gov](https://www.smokefree.gov).

### Get enough good-quality sleep

Sleep helps heal and repair your heart and blood vessels. The recommended nightly amount for adults is 7 to 9 hours.

### Limit alcohol consumption

Drinking too much alcohol—more than two drinks a day for men or one drink a day for women—can raise your total cholesterol level.

## **Maintain a healthy weight**

If you have high cholesterol and overweight or obesity, you may improve your health by aiming for a healthy weight. Overweight and obesity increase triglycerides and LDL or "bad" cholesterol and lower HDL or "good" cholesterol.

- Research shows that adults with overweight and obesity can lower LDL and raise HDL levels by losing about 3% to 5% of their weight.
- If you have overweight or obesity, it's important to follow your healthcare provider's recommendations for losing weight. Health professionals recommend losing 5% to 10% of your initial weight over about 6 months.



A healthy weight for adults is usually when the body mass index (BMI) is between 18.5 and 24.9. To figure out your BMI, use an [online BMI calculator](#) and compare your numbers with this table:

Weight Category	Body Mass Index
Underweight	Below 18.5
Healthy weight	18.5 to 24.9
Overweight	25 to 29.9
Obese	30 or above

Always talk to your healthcare provider about what your BMI means for you. It's only one piece of the puzzle for your overall health and doesn't account for muscle mass, bone density, or body composition. Talk to your child's healthcare provider to determine whether your growing child has a healthy weight. A provider should compare your child's BMI to growth charts specific to their age and sex.



## **Track your progress**

Record any lifestyle changes you're making. You'll see how small changes can add up to big improvements. Share your information with your healthcare provider.

Write in a journal or use an app to record:

- The number of servings of fruits and vegetables you eat
- Time spent on moderate to vigorous physical activity
- Your weight
- Hours of good-quality sleep you get each night
- Your blood pressure and cholesterol



## Medication for high cholesterol

If you make healthy lifestyle changes and your cholesterol levels are still high, your healthcare provider may prescribe medicine to help lower your LDL or "bad" cholesterol. Even if you take cholesterol medicine, keep up your healthy lifestyle changes. The combination of the medicine and heart-healthy lifestyle changes can help lower and control your cholesterol levels.



### Questions to ask your healthcare provider about your cholesterol



- What are my cholesterol levels? What should they be?
- How often should I have mine checked?
- What other lifestyle factors should I consider to improve my cholesterol and overall heart health?
- Do I need cholesterol medicine? Will it have side effects?
- Are there any foods, other medicines, vitamins, or herbal supplements that may change how well my cholesterol medicine works?

## Making lasting changes

Changing your lifestyle and focusing on your health can be hard. But small changes can make a big difference for your cholesterol levels and your overall health! Social support makes it easier to live a heart-healthy lifestyle, so ask a family member or friend to join you on your journey.

For more information about cholesterol, check out [www.nhlbi.nih.gov/health/blood-cholesterol](http://www.nhlbi.nih.gov/health/blood-cholesterol).