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Cholesterol

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Reviewed by: [Mary L. Gavin, MD](#)

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What Is Cholesterol?

Cholesterol is a waxy, fat-like substance made by the liver. Cholesterol (kuh-LES-teh-rawl) helps build cell membranes and is used to make hormones, like estrogen and testosterone, and [vitamin D](#).

Most parents probably don't think about what cholesterol means for their kids. But heart disease has its roots in childhood. So high levels of cholesterol in children can increase their chances of heart disease and [strokes](#) as adults.

Where Does Cholesterol Come From?

The liver makes all the cholesterol that the body needs. But cholesterol also comes from some of the foods we eat. Foods that are high in saturated fat and trans fat also can increase the liver's production of cholesterol.

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These foods from animals contain cholesterol:

- egg yolks
- meat
- poultry
- seafood
- dairy products (including milk, cheese, and ice cream)

Foods from plants, like vegetables, fruits, and grains, don't have any cholesterol.

What Are the Types of Cholesterol?

Cholesterol in the blood doesn't move through the body on its own. It combines with proteins to travel through the bloodstream. Cholesterol and protein traveling together are called **lipoproteins** (lie-poh-PRO-teenz).

Low-density lipoprotein (LDL) and high-density lipoprotein (HDL) are the lipoproteins that most of us have heard about.

Low-density lipoproteins, or "bad cholesterol," can build up on the walls of the arteries. Cholesterol and other substances in the blood form **plaque**. Plaque buildup can make blood vessels become stiffer, narrower, or blocked. Plaque makes it easier for blood clots to form. A blood clot can block a narrowed artery and cause a heart attack or stroke.

Atherosclerosis (ah-theh-roe-skleh-ROE-siss), or hardening of the arteries, also leads to decreased blood flow to vital organs, including the brain, intestines, and kidneys.

High-density lipoproteins, or "good cholesterol," carry cholesterol away from the arteries and

back to the liver. In the liver, cholesterol is broken down and removed from the body.

High levels of LDL and low levels of HDL increase a person's risk of heart disease.

What Causes High Cholesterol?

Three major things contribute to high cholesterol levels:

- diet: eating a diet high in fats, particularly saturated **fat** and trans fat
- heredity: having a parent or close family member with high cholesterol
- **obesity**: having a poor diet and not exercising

People who are physically active, eat healthy foods, don't have a family history of high cholesterol or heart disease, and aren't overweight are less likely to have high cholesterol.

How Is High Cholesterol Diagnosed?

All kids should have their cholesterol checked when they're between 9 and 11 years old and again when they're between 17 and 21.

Kids over 2 years old should be tested if they:

- have a parent or other close relative with a total cholesterol higher than 240 mg/dL
- have a family history of cardiovascular disease before age 55 in men and age 65 in women
- have some kinds of medical conditions (such as **kidney disease**, **Kawasaki disease**, or **juvenile idiopathic arthritis**)
- are overweight or obese

- have [diabetes](#), high blood pressure, or smoke cigarettes

Your doctor can order a blood test to check your child's cholesterol. Your child may have to fast (nothing to eat or drink, except water, for 12 hours) before the test.

According to the National Cholesterol Education Program (NCEP) guidelines, the ranges of total and LDL cholesterol for kids and teens 2–18 years old are:

Category	Total cholesterol (mg/dL)	LDL cholesterol (mg/dL)
Acceptable	Less than 170	Less than 110
Borderline	170-199	110-129
High	200 or greater	130 or greater

mg/dL = milligrams per deciliter

How Is High Cholesterol Treated?

If your child has an LDL cholesterol level of 130 mg/dL or higher, your doctor will talk to you about lifestyle changes or refer you to a [dietitian](#). The goals are to:

- reduce fat (especially saturated fat and trans fat) and cholesterol in the diet
- increase exercise
- lose weight, if needed

Your doctor will probably do a cholesterol check again after 3–6 months of lifestyle changes.

Medicine might be considered for kids 10 and

older whose LDL cholesterol is 190 mg/dL or higher if changes in diet and exercise haven't worked. Kids with risk factors, such as diabetes or [high blood pressure](#) or a family history of high cholesterol or heart disease, may need treatment at lower LDL levels.

5 Ways to Lower Cholesterol

First, check your own cholesterol level — and if it's high, ask to have your kids' levels checked.

Here are 5 ways to help keep your family's cholesterol in control:

1. Serve a heart-healthy diet, including:
 - vegetables, fruit, and whole grains
 - lean meats and poultry, fish, nuts, beans, and soy products
 - nonfat or low-fat milk and dairy products
 - healthy fats, like those found in fish, nuts, and vegetable oils
2. Limit drinks and foods with added sugars.
3. Read [nutrition facts labels](#) so that you can limit cholesterol and saturated fat and trans fat.
4. Encourage plenty of exercise. Exercise helps boost HDL levels in the blood — and that's a good thing! Kids and teens should be physically active at least 60 minutes a day.
5. Help your kids keep a healthy weight.

Make healthy living a family effort. Improving your lifestyle now will benefit everyone's health now and far into the future.

Reviewed by: [Mary L. Gavin, MD](#)

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Cholesterol

Post Test – November 2023

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1. Cholesterol is a waxy, fat-like substance made by the _____.
2. High levels of cholesterol in children can increase their chances of heart disease and _____ as adults.
3. Cholesterol and proteins traveling together are called lipoproteins. True or False?
4. Plaque buildup can make blood vessels become stiffer, narrower or _____. Plaque makes it easier for blood _____ to form.
5. In the liver, cholesterol is broken down and _____ from the body.
6. Three major things contribute to high cholesterol levels: diet, heredity and _____.
7. All kids should have their cholesterol checked when they are between 2 and 8 years old and again when they are between 22 and 25 years old. True or False?
8. If your child has an LDL cholesterol level of 130 mg/dL or higher, your doctor will talk to you about lifestyle changes or refer you to a _____. The goal, reduce fat, increase exercise, lose weight.
9. Kids with risk factors, such as diabetes or _____ _____ or a family history of high cholesterol or heart disease, may need treatment at lower LDL levels.
10. Exercise helps boost HDL levels in the blood and that is a good thing! Kids and teens should be physically active at least _____ minutes a day.

October 2023 Quiz Answers. 1.Immune System 2.90% 3.True 4.Anaphylaxis 5.Intolerance 6.Symptoms 7.False 8.Food Labels 9.Contamination 10.Avoid



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