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# High Cholesterol in Children and Teens

## What is cholesterol?

Cholesterol [<https://medlineplus.gov/cholesterol.html>] is a waxy, fat-like substance that's found in all the cells in the body. The liver makes cholesterol, and it is also in some foods, such as meat and dairy products. The body needs some cholesterol to work properly. But if your child or teen has high cholesterol (too much cholesterol in the blood), it can stick to the walls of their arteries and narrow or even block the arteries. This can put your child or teen at risk of **coronary artery disease** [<https://medlineplus.gov/coronaryarterydisease.html>] and other heart diseases [<https://medlineplus.gov/heartdiseases.html>] .

## What causes high cholesterol in children and teens?

Three main factors contribute to high cholesterol in children and teens:

- An unhealthy diet, especially one that is high in saturated fats [<https://medlineplus.gov/dietaryfats.html>]
- A family history of high cholesterol, especially when one or both parents have high cholesterol
- Having obesity [<https://medlineplus.gov/obesityinchildren.html>]

Some diseases, such as diabetes [<https://medlineplus.gov/diabetesinchildrenandteens.html>] , kidney disease [<https://medlineplus.gov/kidneydiseases.html>] , and certain thyroid diseases [<https://medlineplus.gov/thyroiddiseases.html>] , can also cause high cholesterol in children and teens.

## What are the symptoms of high cholesterol in children and teens?

There are usually no signs or symptoms that your child or teen has high cholesterol.

## How do I know if my child or teen has high cholesterol?

There is a blood test [<https://medlineplus.gov/cholesterollevelswhatyouneedtoknow.html>] to measure cholesterol levels. The test gives information about:

- **Total cholesterol.** This is a measure of the total amount of cholesterol in your blood. It includes both low-density lipoprotein (LDL [<https://medlineplus.gov/ldlthebadcholesterol.html>] ) cholesterol and high-density lipoprotein (HDL [<https://medlineplus.gov/hdlthegoodcholesterol.html>] ) cholesterol.
- **LDL cholesterol.** LDL is often called "bad" cholesterol because it is the main source of cholesterol buildup and blockage in the arteries.
- **HDL cholesterol.** HDL is often called "good" cholesterol because it helps remove cholesterol from your arteries.
- **Non-HDL.** This number is your total cholesterol minus your HDL. Your non-HDL includes LDL and other types of cholesterol such as VLDL (very-low-density lipoprotein).
- **Triglycerides** [<https://medlineplus.gov/triglycerides.html>] . This is another type of fat in your blood that can raise the risk of heart disease.

For anyone aged 19 or younger, the healthy levels of cholesterol are

### Type of Cholesterol

Total Cholesterol

### Healthy Level

Less than 170 mg/dL

## Type of Cholesterol

## Healthy Level

Non-HDL

Less than 120 mg/dL

LDL

Less than 110 mg/dL

HDL

More than 45 mg/dL

When and how often your child or teen should get this test depends on their age, risk factors, and family history. The general recommendations are:

- The first test should be between ages 9 to 11
- Children should have the test again every 5 years
- Some children may have this test starting at age 2 if there is a family history of high cholesterol, heart attack [<https://medlineplus.gov/heartattack.html>] , or stroke [<https://medlineplus.gov/stroke.html>]

## What are the treatments for high cholesterol in children and teens?

Lifestyle changes are the main treatment for high cholesterol in children and teens. These changes include:


- **Being more active.** This includes getting regular physical activity [<https://medlineplus.gov/howmuchexercisedoined.html>] and spending less time sitting [<https://medlineplus.gov/healthrisksofaninactivelifestyle.html>] (in front of a television, at a computer, on a phone or tablet, etc.).
- **Healthy eating.** A diet to lower cholesterol [<https://medlineplus.gov/howtolowercholesterolwithdiet.html>] includes limiting foods that are high in saturated fat, sugar, and cholesterol. It is also important to eat plenty of fresh fruits, vegetables, and whole grains.
- **Losing weight**, if your child or teen is overweight or has obesity.

If everyone in the family makes these changes, it will be easier for your child or teen to stick to them. It is also an opportunity to improve your health, and the health of the rest of your family.

Sometimes these lifestyle changes are not enough to lower your child or teen's cholesterol. Their health care provider may consider giving your child or teen cholesterol medicines if they:

- Are at least 10 years old.
- Have an LDL (bad) cholesterol level that is higher than 190 mg/dL, even after six months of diet and exercise changes.
- Have an LDL (bad) cholesterol level that is higher than 160 mg/dL AND are at high risk for heart disease.
- Have familial hypercholesterolemia [<https://medlineplus.gov/genetics/condition/familial-hypercholesterolemia/>] (FH). FH is an inherited disorder that causes very high levels of cholesterol in the blood.

## Learn More

- Cholesterol (For Parents) [<https://kidshealth.org/en/parents/cholesterol.html>] (Nemours Foundation)  
Also in Spanish [<https://kidshealth.org/es/parents/cholesterol.html>]
- Cholesterol - drug treatment [<https://medlineplus.gov/ency/patientinstructions/000314.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000314.htm>]
- Cholesterol Levels [<https://medlineplus.gov/lab-tests/cholesterol-levels/>]  (National Library of Medicine)  
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/niveles-de-colesterol/>]
- Dietary Fat and Cholesterol [<https://youngwomenshealth.org/guides/dietary-fat-and-cholesterol/>] (Boston Children's Hospital)  
Also in Spanish [<https://youngwomenshealth.org/guias/el-colesterol-y-las-grasas/>]
- Familial combined hyperlipidemia [<https://medlineplus.gov/ency/article/000396.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000396.htm>]
- Familial hypercholesterolemia [<https://medlineplus.gov/ency/article/000392.htm>] (Medical Encyclopedia)  
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000392.htm>]
- High cholesterol - children [<https://medlineplus.gov/ency/article/007701.htm>] (Medical Encyclopedia)

Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007701.htm>]

- **How to Lower Cholesterol: MedlinePlus Health Topic** [<https://medlineplus.gov/howtolowercholesterol.html>]

 (National Library of Medicine)

Also in Spanish [<https://medlineplus.gov/spanish/howtolowercholesterol.html>]


- **What Is Cholesterol? (For Teens)** [<https://kidshealth.org/en/teens/cholesterol.html>] (Nemours Foundation)

Also in Spanish [<https://kidshealth.org/es/teens/cholesterol.html>]

- **What's Cholesterol? (For Kids)** [<https://kidshealth.org/en/kids/cholesterol.html>] (Nemours Foundation)

Also in Spanish [<https://kidshealth.org/es/kids/cholesterol.html>]

## Clinical Trials

- **ClinicalTrials.gov: High Cholesterol in Children and Teens** [<https://clinicaltrials.gov/search?cond=Hypercholesterolemia&aggFilters=ages:child,status:not%20rec>]  (National Institutes of Health)

## Journal Articles

**References and abstracts from MEDLINE/PubMed (National Library of Medicine)**

- **Article: Pediatric Familial Hypercholesterolemia: Targeting Intestinal Absorption and Other Therapeutic Strategies.** [<https://www.ncbi.nlm.nih.gov/pubmed/40732982>]

- **Article: Health economic considerations of screening for early type 1 diabetes.** [<https://www.ncbi.nlm.nih.gov/pubmed/40555704>]

- **Article: Research progress in abnormal carbohydrate, lipid, and protein metabolism in children...** [<https://www.ncbi.nlm.nih.gov/pubmed/40475996>]

- **High Cholesterol in Children and Teens -- see more articles** [<https://pubmed.ncbi.nlm.nih.gov/?term=%28hypercholesterolemia%5Bmajr%5D+OR+hypercholesterolemia%5Btext%5D+OR+hyperlipidemias%5Bmesh%5D+OR+hyperlipoproteinemias%5Bmesh%5D+OR+hyperlipoproteinemias%5Btext%5D+OR+high+blood+triglycerides%5Btext%5D+OR+high+triglycerides%5Btext%5D+OR+high+cholesterol%5Btext%5D%29+AND+%28child%5Bmesh%5D+OR+child%5Btext%5D+OR+child%2Cpreschool%5Bmesh%5D+OR+preschool%5Btext%5D+OR+children%5Btext%5D+OR+adolescent%5Bmesh%5D+OR+teens%5Btext%5D+OR+teenagers%5Btext%5D%29+AND+%28systematic%5Bsb%5D+OR+patient+education+handout%5Bpt%5D+OR+review%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29+AND+english%5Bla%5D+AND+humans%5Bmesh%5D+NOT+%28letter%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND%22last+2+Years%22%5Bedat%5D>]

## Patient Handouts

- **Exercise and activity - children** [<https://medlineplus.gov/ency/patientinstructions/000353.htm>] (Medical Encyclopedia)

Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000353.htm>]

- **Supporting your child with weight loss** [<https://medlineplus.gov/ency/patientinstructions/000354.htm>] (Medical Encyclopedia)

Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000354.htm>]



Related Health Topics

- Child Nutrition [https://medlineplus.gov/childnutrition.html]
- Cholesterol [https://medlineplus.gov/cholesterol.html]
- Cholesterol Levels: What You Need to Know [https://medlineplus.gov/cholesterollevelswhatyouneedtoknow.html]
- Exercise for Children [https://medlineplus.gov/exerciseforchildren.html]
- HDL: The "Good" Cholesterol [https://medlineplus.gov/hdlthegoodcholesterol.html]
- LDL: The "Bad" Cholesterol [https://medlineplus.gov/ldlthebadcholesterol.html]
- Obesity in Children [https://medlineplus.gov/obesityinchildren.html]

National Institutes of Health

The primary NIH organization for research on *High Cholesterol in Children and Teens* is the National Heart, Lung, and Blood Institute [http://www.nhlbi.nih.gov/]

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