



<u>KidsHealth</u> > <u>Parents</u> > <u>Food & Nutrition</u> > <u>General Nutrition</u> > Cholesterol and Your Child

General Health
Infections
Emotions & Behavior
Growth & Development
Nutrition & Fitness
Recipes
Pregnancy & Newborns
Medical Problems
Q&A
Positive Parenting
First Aid & Safety
Doctors & Hospitals
In the News
En español

Most parents probably don't think about what cholesterol means for their kids. But high levels of cholesterol are a major factor contributing to heart disease and stroke, and medical research shows that cardiovascular disease has its roots in childhood. And with the dramatic increase in childhood obesity, more and more kids are at risk.

Problems associated with high cholesterol generally don't show up for years, so making the connection between kids' health and cholesterol can be difficult. But it's important to know your kids' cholesterol levels, especially if there's a family history of high cholesterol or premature heart disease.

Identifying high cholesterol now will let you and your doctor work together to make changes that will lower your child's risk of developing heart disease later.



About Cholesterol

Cholesterol is a waxy substance produced by the liver. It's one of the **lipids**, or fats, the body makes and is used to form cell membranes and some hormones.

If you never ate another bowl of ice cream or another cheeseburger, your body would have enough cholesterol to run smoothly. That's because the liver makes enough



for healthy body function. In fact, the liver produces about 1,000 milligrams of cholesterol a day. The rest comes from the foods we eat.

Although vegetables, fruits, and grains don't have any cholesterol, the following foods from animals do:

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

Good vs. Bad Cholesterol

Cholesterol doesn't move through the body on its own. It has to combine with proteins to travel through the bloodstream to where it's needed. Cholesterol and protein traveling together are called **lipoproteins**.

Two kinds — low-density lipoprotein (LDL) and high-density lipoprotein (HDL) — are the ones most people have heard about.

Low-density lipoproteins, or "bad cholesterol," are the primary cholesterol carriers. If there's too much LDL in the bloodstream, it can build up on the walls of the arteries that lead to the heart and the brain. This buildup forms plaque — a thick, hard substance that can cause blood vessels to become stiffer, narrower, or blocked. Atherosclerosis is the name for hardening of the arteries. If a blood clot forms and blocks a narrowed artery, the result can be a heart attack or stroke.

Atherosclerosis can also diminish blood flow to other vital organs, including the intestines or kidneys.

High-density lipoproteins is the "good cholesterol" because it carries cholesterol away from the arteries and back to the liver, where it's processed and sent out of the body. It may even help remove cholesterol from already formed plaques.

High levels of LDL increase the risk for heart disease and

stroke. But high levels of HDL can help protect the circulatory system.

Three major factors contribute to high cholesterol levels:

- diet: a diet high in fats, particularly saturated and trans fats
- 2. heredity: having parents or a parent with high cholesterol
- 3. obesity: related to both diet and lack of exercise

Kids who are physically active, eat healthy foods, don't have a family history of high cholesterol, and aren't overweight probably aren't at risk for high cholesterol. Your doctor will help decide whether you should have your child's cholesterol level checked.

Monitoring and Treating High Cholesterol

Current guidelines recommend screening in kids who are at risk for high cholesterol starting at age 2 but no later than age 10. Screening is recommended for kids who:

- have a parent with a total cholesterol higher than 240 mg/dL
- have a family history of cardiovascular disease prior to the age of 55 in men and 65 in women
- have an unknown family history
- are overweight or obese
- have additional risk factors, such as diabetes, high blood pressure, or cigarette smoking

Your doctor can order a simple blood test, usually done fasting (nothing to eat or drink, except water, for 12 hours), to tell you if your child's cholesterol is too high.

According to the National Cholesterol Education Program (NCEP) guidelines for kids and adolescents, the ranges of total and LDL cholesterol for kids 2 years to 19 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

Kids whose results are acceptable should be screened every 3 to 5 years. Those with borderline cholesterol levels should be rechecked in 1 year.

Kids whose range is 170 or higher should be rechecked after 3 to 6 months of increased physical activity and diet therapy that focuses on reducing dietary fat and cholesterol (possibly with input from a registered dietician).

Medication may be considered for kids over 8 years old with LDL cholesterol levels of 190 or higher if changes in diet and exercise haven't worked. For kids with additional risk factors, treatment may be considered at even lower levels.

10 Ways to Lower Cholesterol

Here are 10 ways to help keep your family's cholesterol at healthy levels:

- Know your own cholesterol level and if it's high, ask to have your kids checked.
- 2. Serve a diet rich in fruit, vegetables, and whole grains.
- 3. Choose lean meats and vegetable alternatives, including fish, legumes (dried beans, peas, and lentils), and tofu or other soy products
- 4. Read nutrition facts labels so that you can limit cholesterol and saturated and trans fat intake. The 2005 Dietary Guidelines and the American Heart Association (AHA) recommend keeping dietary fat intake between 30%-35% for kids 2-3 years old and between 25%-35% for kids 4 and older, with

most fats coming from sources of unsaturated fats, such as fish, nuts, and vegetable oils.

For kids older than 2 years and teens, the AHA recommends limiting:

- o cholesterol to less than 300 milligrams a day
- o saturated fats to less than 7% of calories
- o trans fats to less than 1% of calories
- 5. Choose nonfat or low-fat milk and dairy products.
- 6. Stay away from solid fats. Use vegetable oil for cooking and soft margarine for table use.
- 7. Limit beverages and foods with added sugars.
- Limit commercially prepared baked goods and serve healthy snacks such as fresh fruit, vegetables with low-fat dip, lite popcorn, and lowfat yogurt.
- Get plenty of exercise. Exercise helps boost HDL levels in the blood and that's a good thing! Kids
 years of age and older and teens should be physically active at least 60 minutes a day.
- 10. Make living healthier a family affair. Kids usually aren't the only ones at risk, so it's important to make this a family effort. The strides you take to improve your family's lifestyle can have a positive effect on your family's health not only now, but far into the future.

Reviewed by: Mary L. Gavin, MD Date reviewed: September 2008

