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Cholesterol Levels: What You Need to Know

What is cholesterol?

Cholesterol [<https://medlineplus.gov/cholesterol.html>] is a waxy, fat-like substance that's found in all the cells in your body. Your body needs some cholesterol to work properly. But if you have too much of it in your blood, it can stick to the walls of your arteries and narrow or even block them. This puts you at risk of coronary artery disease [<https://medlineplus.gov/coronaryarterydisease.html>] and other heart diseases [<https://medlineplus.gov/heartdiseases.html>] .

How do you measure cholesterol levels?

A blood test [<https://medlineplus.gov/lab-tests/cholesterol-levels/>] called a lipoprotein or lipid panel can measure your cholesterol levels. Before the test, you'll need to fast [<https://medlineplus.gov/lab-tests/fasting-for-a-blood-test/>] (not eat or drink anything but water) for 9 to 12 hours. The test gives information about your:

- **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, especially in women [<https://medlineplus.gov/heartdiseaseinwomen.html>] .

What do my cholesterol numbers mean?

Cholesterol numbers are measured in milligrams per deciliter (mg/dL). Talk with your healthcare provider about what your cholesterol numbers should be. The numbers that are best for you may depend on your age, race, blood pressure, weight, family history, and more. However, here are some general guidelines showing the desirable levels (levels that are healthy for most people):

Anyone age 19 or younger:

Type of Cholesterol	Healthy Level
Total Cholesterol	Less than 170 mg/dL
Non-HDL	Less than 120 mg/dL
LDL	Less than 110 mg/dL
HDL	More than 45 mg/dL

Men age 20 or older:

Type of Cholesterol	Healthy Level
Total Cholesterol	Less than 200 mg/dL
Non-HDL	Less than 130 mg/dL
LDL	Less than 100 mg/dL
HDL	Greater than or equal to 60 mg/dL is best. Levels less than 40 mg/dL are considered low.

Women age 20 or older:

Type of Cholesterol	Healthy Level
Total Cholesterol	Less than 200 mg/dL
Non-HDL	Less than 130 mg/dL
LDL	Less than 100 mg/dL
HDL	Greater than or equal to 60 mg/dL is best. Levels less than 50 mg/dL are considered low.

Triglycerides are not a type of cholesterol, but they are also measured in this test. A normal triglyceride level is below 150 mg/dL. You might need treatment if you have triglyceride levels that are borderline high (150–199 mg/dL) or high (200 mg/dL or more).

How often should I get a cholesterol test?

When and how often you should get a cholesterol test depends on your age, risk factors, and family history. The general recommendations are:

For people who are age 19 or younger:

- 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, or stroke

For people who are ages 20 to 65:

- Younger adults should have the test every 5 years
- Men ages 45 to 65 and women ages 55 to 65 should have it every 1 to 2 years

For people older than 65::

- They should be tested every year

What affects my cholesterol levels?

Many factors can affect your cholesterol levels. Some of them are things you can change:

- **Diet.** Saturated fat [<https://medlineplus.gov/dietaryfats.html>] and cholesterol in the food you eat make your blood cholesterol level rise. Saturated fat is the main problem, but cholesterol in foods also matters. Reducing the amount of saturated fat in your diet helps lower your blood cholesterol level. Foods that have

high levels of saturated fats include red meats, full-fat dairy products, chocolate, some baked goods, and deep-fried and processed foods.

- **Weight.** Being overweight or having obesity [<https://medlineplus.gov/obesity.html>] are risk factors for heart disease. They also tend to increase your cholesterol
- **Lack of physical activity** [<https://medlineplus.gov/healthrisksofaninactivestyle.html>] . Not being physically active is a risk factor for heart disease.
- **Smoking** [<https://medlineplus.gov/smoking.html>] . Cigarette smoking lowers your HDL cholesterol. Since HDL helps to remove cholesterol from your arteries, having a lower HDL level can contribute to a higher cholesterol level.

Some factors that you cannot change can also affect cholesterol levels, such as:

- **Age.** Your cholesterol levels tend to rise as you get older. Even though it is less common, younger people, including children and teens [<https://medlineplus.gov/highcholesterolinchildrenandteens.html>] , can also have high cholesterol.
- **Sex.** Between ages 20 and 39, men have a greater risk of high total cholesterol than women. But after menopause [<https://medlineplus.gov/menopause.html>] , a woman's risk goes up. This happens because menopause lowers levels of female hormones that may protect against high blood cholesterol.
- **Family history.** Your genes partly determine how much cholesterol your body makes. High cholesterol can run in families.
- **Race or ethnicity.** People from certain racial or ethnic groups may have an increased risk of high cholesterol. For example, Asian Americans are more likely to have high levels of LDL cholesterol than other groups. And non-Hispanic White people are more likely than other groups to have high levels of total cholesterol.

How can I lower my cholesterol?

You can lower your cholesterol [<https://medlineplus.gov/howtolowercholesterol.html>] through heart-healthy lifestyle changes. They include a heart-healthy eating plan [<https://medlineplus.gov/howtolowercholesterolwithdiet.html>] , weight management [<https://medlineplus.gov/weightcontrol.html>] , and regular physical activity [<https://medlineplus.gov/howmuchexercisedoined.html>] .

If the lifestyle changes alone do not lower your cholesterol enough, you may also need to take medicines. There are several types of cholesterol-lowering medicines [<https://medlineplus.gov/cholesterolmedicines.html>] available, including statins [<https://medlineplus.gov/statins.html>] . If you take medicines to lower your cholesterol, you still should continue with the lifestyle changes.

NIH: National Heart, Lung, and Blood Institute

Learn More

- Cholesterol – what to ask your doctor [<https://medlineplus.gov/ency/patientinstructions/000211.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000211.htm>]
- Cholesterol and lifestyle [<https://medlineplus.gov/ency/patientinstructions/000099.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000099.htm>]
- Cholesterol Good and Bad [<https://medlineplus.gov/medlineplus-videos/cholesterol-good-and-bad/>]
 (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/videos-de-medlineplus/colesterol-bueno-y-colesterol-malo/>]
- 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/>]
- High blood cholesterol levels [<https://medlineplus.gov/ency/article/000403.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000403.htm>]
- Test Your Cholesterol Knowledge [https://medlineplus.gov/ency/quiz/000403_9.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/quiz/000403_69.htm]

- Total Cholesterol [<https://www.heart.org/-/media/Files/Health-Topics/Cholesterol/Cholesterol-Score-Explained-English.pdf>] (American Heart Association) – PDF
- Triglycerides Test [<https://medlineplus.gov/lab-tests/triglycerides-test/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-trigliceridos/>]
- What Your Cholesterol Levels Mean [<https://www.heart.org/en/health-topics/cholesterol/about-cholesterol/what-your-cholesterol-levels-mean>]  (American Heart Association)

Clinical Trials

- ClinicalTrials.gov: Cholesterol [<https://clinicaltrials.gov/search?cond=%22Cholesterol%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Hypercholesterolemia [<https://clinicaltrials.gov/search?cond=%22Hypercholesterolemia%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Hyperlipidemia, Familial Combined [<https://clinicaltrials.gov/search?cond=%22Hyperlipidemia,+Familial+Combined%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Hyperlipidemias [<https://clinicaltrials.gov/search?cond=%22Hyperlipidemias%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Hyperlipoproteinemia Type II [<https://clinicaltrials.gov/search?cond=%22Hyperlipoproteinemia+Type+II%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

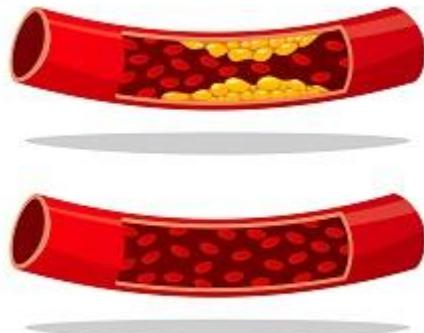
Journal Articles

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

- Article: Hypoxic Training with Calorie Restriction Improves Lipid Profile and Body Composition... [<https://www.ncbi.nlm.nih.gov/pubmed/41303531>]
- Article: Chemometrics-guided plasma lipidomics insights underlying the decrease of plasma total cholesterol... [<https://www.ncbi.nlm.nih.gov/pubmed/41241688>]
- Article: Almond Consumption on HDL Cholesterol and CVD Risk Factors in Adults... [<https://www.ncbi.nlm.nih.gov/pubmed/41060820>]
- Cholesterol Levels: What You Need to Know -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Cholesterol%2Fblood%22%5Bmajr%3Aexp%5D+OR+%22Hypercholesterolemia%22%5Bmajr%3Aexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Patient Handouts

- Cholesterol testing and results [<https://medlineplus.gov/ency/patientinstructions/000386.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000386.htm>]



MEDICAL ENCYCLOPEDIA

Total cholesterol [<https://medlineplus.gov/ency/article/007813.htm>]

Related Health Topics

Cholesterol [<https://medlineplus.gov/cholesterol.html>]

Cholesterol Medicines [<https://medlineplus.gov/cholesterolmedicines.html>]

Dietary Fats [<https://medlineplus.gov/dietaryfats.html>]

HDL: The "Good" Cholesterol [<https://medlineplus.gov/hdlthegoodcholesterol.html>]

Heart Diseases [<https://medlineplus.gov/heartdiseases.html>]

High Cholesterol in Children and Teens [<https://medlineplus.gov/highcholesterolinchildrenandteens.html>]

How to Lower Cholesterol [<https://medlineplus.gov/howtolowercholesterol.html>]

How to Lower Cholesterol with Diet [<https://medlineplus.gov/howtolowercholesterolwithdiet.html>]

LDL: The "Bad" Cholesterol [<https://medlineplus.gov/ldlthebadcholesterol.html>]

Nutrition [<https://medlineplus.gov/nutrition.html>]

Statins [<https://medlineplus.gov/statins.html>]

Triglycerides [<https://medlineplus.gov/triglycerides.html>]

VLDL Cholesterol [<https://medlineplus.gov/vldlcholesterol.html>]

National Institutes of Health

The primary NIH organization for research on *Cholesterol Levels: What You Need to Know* is the National Heart, Lung, and Blood Institute [<http://www.nhlbi.nih.gov/>]

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Last updated May 5, 2025