

Understanding and Improving Your Cholesterol



SAMPLE

Improve Your Heart Health with Life's Simple 7®

Life's Simple 7® is a program about the seven steps everyone should take to achieve ideal cardiovascular health. Learn more at mylifecheck.heart.org.



This booklet will help you:
Control Your Cholesterol

Why Worry About Cholesterol?

Understanding and improving cholesterol is important for men and women of all ages. Too much cholesterol contributes to a higher risk for cardiovascular diseases, such as heart disease and stroke.

Below are common risk factors for developing heart disease.

- High blood pressure (treated or untreated)
- Tobacco smoke
- **High total cholesterol**
- **Low HDL (good) cholesterol**
- Physical inactivity
- Overweight and obesity
- Diabetes
- Age
- Family history

This booklet will help you understand how cholesterol affects the body. ***Your health is why*** we created this booklet to help you learn what you can do to improve your cholesterol and reduce your risk for heart disease and stroke.

Understanding

Cholesterol

It may surprise you to know that cholesterol itself isn't bad. It is a soft, fat-like substance that your body produces naturally. Cholesterol is in the bloodstream and in your body's cells.

Your body makes all the cholesterol it needs and uses it to keep you healthy. It helps make new cells, some hormones and substances that help digest foods.

Cholesterol is part of a healthy body. But having too much of it in your blood can be a problem.

In addition to what your body makes, the foods that you eat can impact your cholesterol levels as well.

Replacing foods that are high in saturated and *trans* fats with foods that have healthier fats can help improve your cholesterol levels.



How Cholesterol Is Measured

If you're between 20 and 79 years old and you don't have a history of atherosclerosis, you should have your cholesterol measured every four to six years. If other factors put you at higher risk for heart disease or stroke, your healthcare provider may want to check it more often.

Your healthcare provider will do a blood test called a "fasting lipoprotein profile" to measure your cholesterol levels. It assesses several types of fat in the blood. It is measured in milligrams per deciliter (mg/dL). The test gives you four results: total cholesterol, LDL (bad) cholesterol and HDL (good) cholesterol, and triglycerides (blood fats).

Previously, treatment guidelines directed healthcare providers to focus on treating their patients to target goal levels for total cholesterol, LDL, HDL and triglycerides. However, current prevention guidelines have concluded that an approach that goes beyond cholesterol levels alone and considers overall risk assessment and reduction is better. It's still important to know your numbers, but work with your healthcare provider to treat your risk. See page 8.

Understanding **LDL, HDL** and **Triglycerides**

Cholesterol moves through your bloodstream to your body's cells in special carriers. These are called **lipoproteins**.

There are several kinds of lipoproteins.

The two most important are low-density lipoprotein (**LDL**) and high-density lipoprotein (**HDL**).

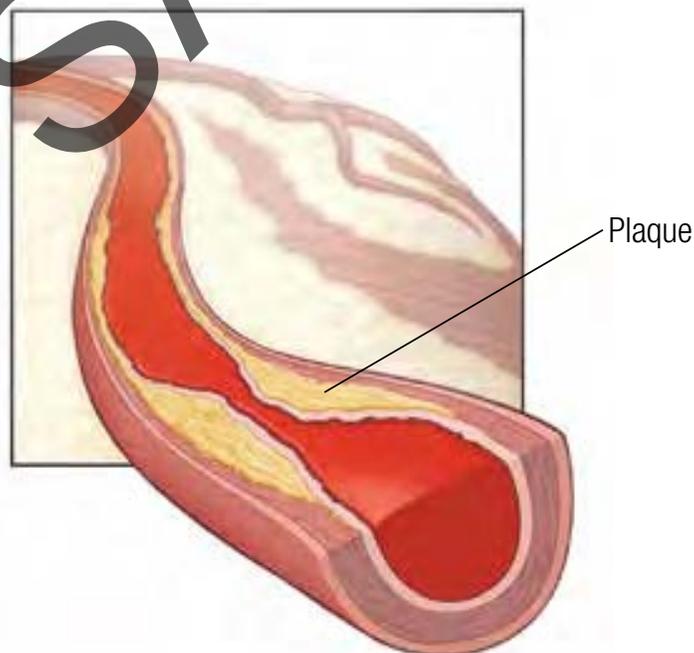
LDL Cholesterol

LDL cholesterol is known as “bad” cholesterol.

The body's tissues use some of this cholesterol to build cells. But when you have too much of it, LDL can build up inside your arteries.

Together with other substances, it can form **plaque** (a thick, hard, fatty deposit). Plaque narrows the arteries and reduces blood flow.

This is called **atherosclerosis**.



Plaque may partially or totally block the blood's flow through an artery. If your heart's arteries become so narrow that your heart can't get enough blood, it can lead to chest pain called angina. Even worse, if the plaque breaks open, causing a blood clot to form, blood flow to part of the heart muscle can be blocked. This causes a heart attack. And if a clot blocks blood flow to part of the brain, a stroke results.

Your doctor may recommend lifestyle changes or medication to lower your LDL if your risk factors show you have an increased risk for heart disease or stroke.

HDL Cholesterol

HDL cholesterol is called "good" cholesterol. Having a high level of HDL can lower your risk of heart attack and stroke. HDL takes cholesterol away from your arteries and back to the liver. There, it's processed so that excess can be removed from your body. HDL may also remove cholesterol from plaque in the arteries.

Triglycerides

Triglycerides are the most common type of fat in the body. They're also a major energy source. They come from food, and your body also makes them.

Certain factors increase your levels of triglycerides and speed up atherosclerosis. As people get older or gain excess weight (or both), their triglyceride and cholesterol levels tend to rise. Being physically inactive, smoking, drinking too much alcohol, and eating too many carbohydrates can also increase triglycerides.



Know **Your Numbers**

Knowing your numbers is important! *The American Heart Association recommends that you be aware of five key numbers: Total cholesterol, HDL (good) cholesterol, blood pressure, fasting blood sugar and body mass index (BMI).**

These numbers are important because they will allow you and your healthcare provider to determine your risk for developing cardiovascular disease caused by atherosclerosis. This includes conditions such as angina (chest pain), heart attack, stroke (caused by blood clots) and peripheral artery disease (PAD).

Ideal numbers for most adults are:

Category	Ideal Number
Total cholesterol	Get your cholesterol checked and talk to your doctor about your numbers and how they impact your overall risk.
HDL (good) cholesterol	
Blood pressure	Less than 120/80 mm Hg
Fasting blood sugar	Less than 100 mg/dL
Body mass index (BMI)	Less than 25 kg/m ² **

* *To learn more about our guidelines and scientific statements, visit heart.org/statements.*

** *To find out what your BMI is, go to heart.org/bmi.*

Treat Your Risk

Making healthy lifestyle changes is the first step in reducing your risk. However, sometimes these changes alone won't reduce your risk enough.

*The American Heart Association recommends that you and your healthcare provider discuss the pros and cons of medical treatment(s) if you are at high risk.**

People at high risk include the four major groups below.

- Adults with known cardiovascular disease, including stroke, caused by atherosclerosis
- Adults with diabetes, aged 40-75 years with an LDL-C level of 70-189 mg/dL
- Adults with LDL-C level of greater than 190 mg/dL
- Adults with LDL-C level of 70-189 mg/dL and a 7.5% or greater 10-year risk of developing cardiovascular disease from atherosclerosis

It is important to talk to your healthcare provider about your 10-year risk. He or she will assess your risk factors to determine your level of risk and work with you to choose the best treatment approach.

** To learn more about our guidelines and scientific statements, visit heart.org/statements.*

Improving Your Cholesterol Through Diet

The food you eat affects your cholesterol, as well as your blood pressure, blood sugar and weight. Your healthcare provider can help you develop a healthy eating plan.

The rest of this booklet offers tips on foods to choose and those to limit to help you improve your cholesterol.

Understanding Saturated Fats

If you have been told that you need to lower your LDL-cholesterol, you may have also been told to limit your saturated fat intake. These fats are found naturally in many foods. They mostly come from animal and dairy sources, such as meat, poultry with skin, cream, butter, cheese and other dairy products made from whole or reduced-fat (2%) milk. They are also in tropical vegetable oils such as palm and coconut oils.

*The American Heart Association recommends that adults who would benefit from lowering LDL cholesterol limit their saturated fat intake to 5 to 6 percent of total calories each day.** For a person who needs 2,000 calories a day, this is about 11 to 13 grams of saturated fat.

** To learn more about our guidelines and scientific statements, visit heart.org/statements.*

Understanding *Trans* Fats

Trans fats are unsaturated, but they can raise total and LDL (bad) cholesterol and lower HDL (good) cholesterol. *Trans* fats occur when hydrogen is added to vegetable oils. This process is known as hydrogenation. It converts oils to solids, which improves a food's shelf life.

Sources of *trans* fats include commercially baked goods, fried foods and snack foods. They're also found in foods made with partially hydrogenated vegetable oils, vegetable shortening or stick margarine. (Soft tub and liquid margarines made without hydrogenated oils should have lower levels of *trans* fats than stick margarines.)

Everyone can benefit by limiting *trans* fats. Reducing your *trans* fat intake is especially important if your doctor has said you should lower your LDL cholesterol.

Healthier Fats

Not all fats are bad for your cholesterol levels. Replacing foods that contain saturated or *trans* fats with those with **polyunsaturated** and **monounsaturated** fats may help lower your LDL cholesterol level. Use them in place of butter, stick margarine and lard in the foods you eat. Examples include:

- **Nontropical plant oils.** They're normally liquid at room temperature. You can use these for sautéing vegetables or in making salad dressings. Examples include olive, corn, safflower, sunflower, soybean, canola, sesame and flaxseed oils.
- **Liquid or soft tub margarine.** These tend to be lower in saturated and *trans* fats than butter or stick margarine. Compare labels and choose those with 0 grams of *trans* fat on the Nutrition Facts label and no hydrogenated oils in the ingredients.
- **Foods containing omega-3 fatty acids.** Foods rich in omega-3 fatty acids may help reduce the risk of heart disease. Some fish provide omega-3 fatty acids, especially oily fish such as mackerel, lake trout, herring, sardines, white tuna and salmon.



Note: Women who are pregnant or nursing and young children should avoid eating fish that may be contaminated with mercury or other toxins. For more information, visit foodsafety.gov.

* To learn more about our guidelines and scientific statements, visit heart.org/statements.

- **Nuts and seeds.** Many of these foods provide protein, fiber and unsaturated fats. Because they are nutrient dense, they tend to be high in calories. You can add unsalted nuts such as walnuts, almonds and pecans to a variety of dishes or have them as a snack.

SAMPLE



Foods to Limit

To improve your cholesterol, choose foods low in saturated and *trans* fats. These fats are usually found in meat, dairy foods and products that are commercially baked or fried. Cutting back on these foods can reduce your risk for cardiovascular disease by lowering your LDL cholesterol level. Try these tips to cut down on saturated fat and *trans* fat.



- Limit your intake of whole-fat dairy products such as butter and whole milk or full-fat dairy products (yogurt, cheeses).
- Eat fewer meats that are high in saturated fat and sodium, such as bologna, salami and sausage.
- Avoid fatty red meats that aren't trimmed.
- Reduce your intake of baked goods such as cakes, cookies, crackers, pastries, pies, muffins and donuts made with saturated fats.
- Reduce your use of solid fats such as shortening, lard and butter.
- Avoid fried foods.

Foods to Choose Most Often

Eating a healthy diet, including foods with low levels of saturated and *trans* fats, can help you improve your cholesterol, and reach and maintain a healthy weight and a normal blood pressure. This can reduce your risk of heart disease and stroke, as well as other chronic health problems, such as type 2 diabetes and some forms of cancer.

The following tips can help you get started.

- Eat a diet rich in fruits and vegetables. Eat a variety of fruits and vegetables, such as spinach, carrots, peaches and berries. They're high in nutrients and delicious.
- Eat plenty of whole grain foods. Choose items such as whole wheat, oats/oatmeal, whole rye, brown rice, bulgur (cracked wheat), and quinoa.
- Select low-fat dairy products such as low-fat, unsweetened yogurt, skim milk and low-fat cheese.



- Choose poultry and fish (without skin), nuts, seeds and legumes (beans and peas) and limit red meat. If you choose to eat red meat, select the leanest cuts available such as those labeled “loin” and “round”. Trim off visible fat before cooking.
- Choose unsaturated, nontropical vegetable oils for cooking, such as canola, olive, safflower and sunflower oils.



SAMPLE

Before You Buy: Read the Label

Make reading food labels at the store a habit. They'll help you choose foods more wisely. Read the ingredients list and look at the calories and nutrients per serving on the Nutrition Facts Label. Watch for these key terms:



- “Free” has none or only a trace amount of a nutrient (for example, sodium).
- “Low” contains a small amount of a nutrient (for example, saturated fat).
- “Reduced” or “Less” always means the food has 25 percent less of that nutrient (for example, calories) than the standard version of the food.

The American Heart Association can help you make smarter choices when grocery shopping. Look for products with the Heart-Check mark throughout the grocery store.

You may also visit heartcheckmark.org for more information and a current list of certified foods.



Cooking Tips

- Prepare foods without adding saturated and *trans* fat, sugar and salt.
- Remove all visible fat from meat and poultry before cooking.
- Grill, bake, steam or broil foods instead of frying.
- Use vegetable oil or spray to brown or sauté foods.
- Instead of regular cheese, use low-fat, low-sodium cheeses.



Other Ways to Reduce Your Risk

- **Don't smoke.** Smoking increases your risk of heart disease and stroke. And daily exposure to second-hand smoke puts you at higher risk.
- **Have your blood pressure checked regularly.** Take steps to lower it if it's high.
- **Be physically active.** If you have high cholesterol, try to get at least 40 minutes of moderate-to-vigorous intensity physical activity three to four times per week.
- **Recognize and treat diabetes.** If you have diabetes, work with your healthcare provider to keep glucose levels under control. Take all prescribed medications as directed.
- **Maintain a healthy weight.** Take steps to lose weight, if needed.
- **Cut back on drinks and food with added sugars.** They tend to be high in calories and low in nutrition.
- **Limit sodium (salt).** Most adults should aim to eat no more than 1,500 mg of sodium per day for optimal heart health. Even cutting back to no more than 2,400 milligrams a day will significantly improve blood pressure and heart health.
- **Don't drink too much alcohol.** If you drink alcohol, do so in moderation. Limit yourself to one drink per day if you're a woman, two drinks if you're a man.

For **More Information**

We want people to experience more of life's precious moments. To do that, we want to help you be healthier—in heart and mind. It's why we've made better heart and brain health our mission.

Life is why™ we have created many educational booklets like this to help you and your family make healthier choices to reduce your risk of heart disease and stroke, manage disease or care for a loved one.

Visit **mylifecheck.heart.org** and complete our My Life Check® assessment and get your personal heart score and a custom plan with the seven steps you may need to improve your heart health.

To learn more, call us toll-free at **1-800-AHA-USA1 (1-800-242-8721)** or contact your nearest American Heart Association office. You can also visit our Web site, **heart.org**.

For information on stroke, call **1-888-4-STROKE (1-888-478-7653)** or visit us online at **strokeassociation.org**.

Heart Attack Warning Signs

Some heart attacks are sudden and intense, but most of them start slowly, with mild pain or discomfort. Here are some of the signs that can mean a heart attack is happening.

- **Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- **Discomfort in other areas of the upper body.** Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- **Shortness of breath.** This may occur with or without chest discomfort.
- **Other signs.** These may include breaking out in a cold sweat, nausea or lightheadedness.

As with men, women's most common heart attack symptom is chest pain or discomfort. But women are somewhat more likely than men to experience some of the other common symptoms, particularly shortness of breath, nausea/vomiting and back or jaw pain.

Stroke Warning Signs

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, or trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness or loss of balance or coordination
- Sudden, severe headache with no known cause

F.A.S.T. is an easy way to remember how to recognize a stroke and what to do. Spot a stroke FAST. **F**ace drooping. **A**rm weakness. **S**peech difficulty. **T**ime to call 9-1-1.

Dial 9-1-1 Fast

Heart attack and stroke are life-or-death emergencies—every second counts. If you suspect you or someone you are with has any of the symptoms of heart attack or stroke, **immediately call 9-1-1 or your emergency response number** so an ambulance can be sent. **Don't delay—get help right away!**

For a stroke, also note the time when the first symptom(s) appeared. If given within 3 to 4.5 hours of the start of symptoms, a clot-busting drug may improve the chances of getting better faster.

Cut along dotted line and keep



For heart- or risk-related information,
call the American Heart Association at
1-800-AHA-USA1 (1-800-242-8721)
or visit us online at **heart.org**.

For stroke information, call our American Stroke
Association at **1-888-4-STROKE (1-888-478-7653)** or visit
strokeassociation.org. For information on life after stroke,
call and ask for the Stroke Family Support Network.



National Center
7272 Greenville Avenue
Dallas, Texas 75231-4596

© 2016, American Heart Association.
All Rights Reserved.



Published and distributed by
The StayWell Company, LLC.

To order, call: 800-333-3032
www.kramesstore.com/aha