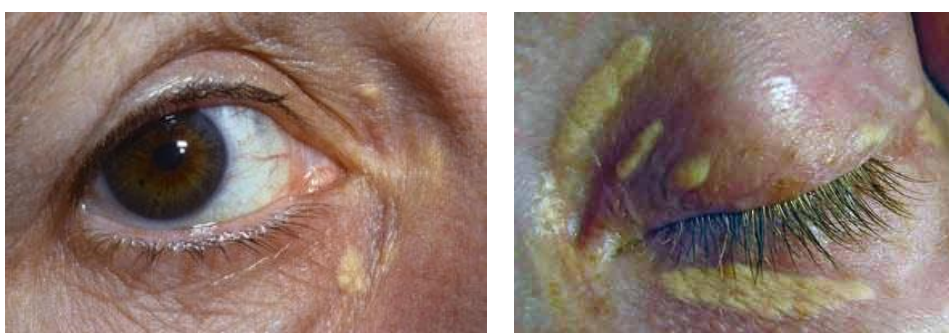


Basic Information on Cholesterol

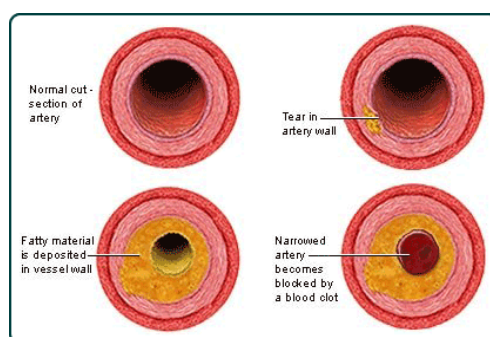
Cholesterol is a waxy, fat-like substance found in the body and in certain foods. Your body needs cholesterol but, when you have too much in your blood, it can build up on the walls of your arteries. This can lead to heart disease and stroke.

There are usually no symptoms of high cholesterol. However, in some cases small yellow bumps appear around the eye.



Many people have never had their cholesterol checked, so they don't know they're at risk. A simple blood test can tell you your level. The good news is that there are steps you can take to prevent high cholesterol—or to reduce your levels if they are high.

Extra cholesterol can build up in your arteries. Over time, cholesterol deposits, called plaque, can narrow your arteries and allow less blood to pass through.



When plaque totally blocks an artery carrying blood to the heart, a heart attack occurs. It also can happen when a deposit ruptures and causes a clot in a coronary artery. Chest pain is caused by plaque partially blocking a coronary artery, reducing blood flow to the heart.

“Good” Cholesterol & “Bad” Cholesterol

- **Low-density lipoproteins (LDL) cholesterol** make up the majority of the body's cholesterol. LDL is known as "**bad**" cholesterol because having high levels can lead to a buildup in the arteries and result in heart disease.
- **High-density lipoproteins (HDL) cholesterol** are naturally produced by the body, absorb cholesterol and carry it back to the liver, which flushes it from the body. High levels of HDL, or "**good**" cholesterol, reduce the risk of heart disease and stroke.

Risk Factors

While there are many things you can do to keep your cholesterol normal, some unhealthy behaviors can contribute to your risk for high cholesterol, which in turn raises your risk of heart disease.

- **Age:**
Because cholesterol tends to rise as people get older, everyone's risk for high cholesterol increases with age. It is recommended that anyone over the age of 20 have a cholesterol test.
- **Diabetes:**
Having diabetes can also make you more likely to develop high cholesterol.
- **Diet:**
Certain foods raise your cholesterol levels. These foods tend to contain saturated fats, trans fatty acids (trans fats), dietary cholesterol, or triglycerides.
- **Being overweight** can raise LDL, lower HDL, and raise total cholesterol levels.
- **Lack of exercise**
- **Heredity**
High cholesterol can run in families. Some people inherit genes that cause them to make too much HDL (*the cholesterol produced naturally by the body*)
- **High Blood Pressure**

What You Can Do to Reduce Cholesterol Levels

Get a Blood Test

- High cholesterol usually has no signs or symptoms. Only a doctor's check will reveal it.
- Your doctor can do a simple blood test to check your cholesterol levels.
- It is recommended that healthy adults get their cholesterol levels checked every five years.

Eat a Healthy Diet

- A healthy diet can help keep blood cholesterol levels down.
- Avoid saturated fat, trans fats, and dietary cholesterol, which tend to raise cholesterol levels.
 - **Saturated fats** are found mostly in animal fat in the diet, but also from some vegetable oils. Foods from animals include beef, beef fat, lamb, pork, poultry fat, butter, margarine, cream, milk, cheeses and other dairy products made from whole and 2% milk. Foods from plants that contain saturated fat include coconut, coconut oil, palm oil (often called tropical oils), and cocoa butter.
 - **Trans fats** come from vegetable oil that has been hardened by a process called hydrogenation. Snack foods, fried foods, fast foods, pastries and cakes are examples of foods high in trans-fats and should not be eaten often.
 - **Dietary cholesterol** occurs in foods that come from animal sources, including egg yolks, meat, and dairy products.
- Increase intake of unsaturated fats. These may help lower your blood cholesterol level when you use them in place of saturated and *trans* fats. They're found mainly in many fish, nuts, seeds and oils from plants. Some examples of foods that contain these fats include salmon, trout, herring, avocados, olives, walnuts and liquid vegetable oils such as soybean, corn, safflower, canola, olive and sunflower.
- Choose a diet rich in fruits, vegetables, whole-grain, high-fiber foods, and fat-free and low-fat dairy most often

- Drinking alcohol can also raise triglycerides (*another type of fat found in food which can raise the risk of heart disease if in large quantities*). Too much alcohol can also cause high blood pressure, which increases the risk for heart disease and stroke.

Maintain a Healthy Weight & Exercise Regularly

Physical activity can help maintain a healthy weight and lower cholesterol. Adults should engage in moderate-intensity exercise for at least 30 minutes on most days of the week.

Don't Smoke & Avoid Second Hand Smoke

- Smoking injures blood vessels and speeds up the hardening of the arteries. Smoking greatly increases a person's risk for heart disease and stroke.
- Breathing secondhand smoke also increases a person's risk for a heart attack and other heart conditions.

Treat High Cholesterol

- If you have high cholesterol, your doctor may prescribe medications in addition to lifestyle changes. Controlling LDL cholesterol is the primary focus of treatment.
- Lifestyle changes are just as important as taking medicines.

Cooking Tips for a low cholesterol diet

- Select lean cuts of meat with minimal visible fat. Lean beef cuts include the round, chuck, sirloin or loin. Lean pork cuts include the tenderloin or loin chop, while lean lamb cuts come from the leg, arm and loin.
- Buy "choice" or "select" grades rather than "prime." Select lean or extra lean ground beef.
- Trim all visible fat from meat before cooking.
- Broil rather than pan-fry meats such as hamburger, lamb chops, pork chops and steak.
- Use a rack to drain off fat when broiling, roasting or baking.

- Cook a day ahead of time. Stews, boiled meat, soup stock or other dishes in which fat cooks into the liquid can be refrigerated. Then the hardened fat can be removed from the top.
- When a recipe calls for browning the meat first, try browning it under the broiler instead of in a pan.
- Remove the skin from chicken or turkey, preferably before cooking. If your poultry dries out too much, leave the skin on for cooking but remove before eating.
- Limit processed meats such as sausage, salami and hot dogs. Many processed meats — even those with "reduced fat" labels — are high in calories and saturated fat. They are often high in sodium as well. Read labels carefully and choose such meats only now and then.
- Organ meats such as liver, kidney and brain are very high in cholesterol. If you're on a cholesterol-lowering diet, eat them only occasionally.
- Choose seafood twice a week. Prepare fish baked, grilled or boiled rather than breaded and fried.
- Reduce the meat in your meal.
- Use liquid veg oils in place of solid fats. Liquid vegetable oils such as canola, safflower, sunflower, soybean, and olive can often be used instead of solid fats such as butter. If you must use margarine, try the soft kind.
- Substitute egg whites for whole eggs. The cholesterol in eggs is all in the yolks -- without the yolk, egg whites are a heart-healthy source of protein. Many recipes calling for whole eggs come out just as good when you use egg whites or cholesterol-free egg substitute instead of whole eggs. Replace each whole egg with two egg whites. For baking, you may want to add a tablespoon or less of liquid vegetable oil such as canola, safflower, sunflower or soybean for a moister consistency.
- Lower dairy fats - Low-fat (1%) or fat-free (skim) milk can be used in many recipes in place of whole milk or half-and-half.
- Serve whole fruit at breakfast in place of juice.
- Use brown rice instead of white rice and try whole grain pasta.
- Add lots of colourful veggies to your salad — carrots, broccoli and cauliflower are high in fibre.

- Reduce sodium. High intake of salt can lead to high blood pressure, which increases the risk of stroke, heart disease and kidney disease. Use herbs and spices in place of salt.
- Limit your intake of foods high in added sodium, such as:
 - Canned and dried soups
 - Canned vegetables
 - Tomato Sauce and mustard
 - Salty snack foods (chips, pretzels, crackers)
 - Olives and pickles
 - Cold meats
 - Bacon and other cured meats
 - Cheeses
- To reduce the salt in canned vegetables, drain the liquid, then rinse the vegetables in water before eating.
- Look for "unsalted" varieties of the canned foods and snack foods listed above. Some foods may be labelled "no salt" or "without added salt."
- Ask restaurants not to add salt to your order.
- Read the labels of all foods carefully. Even bakery products and cereals can be major sources of sodium.

Information sourced from:

www.cdc.gov/cholesterol

www.heart.org/HEARTORG/Conditions/Cholesterol/AboutCholesterol/About-Cholesterol_UCM_001220_Article.jsp