



PATIENT
EDUCATION

Low Saturated Fat Diet

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AMERICAN UNIVERSITY of BEIRUT MEDICAL CENTER
المركز الطبي في الجامعة الأمريكية في بيروت

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Name: _____

Dietitian: _____

Date: _____

What is blood cholesterol?

Cholesterol is a fat-like substance produced by your body and found in all cells and blood vessels. Your body needs cholesterol to make hormones and digestive enzymes. Cholesterol is also found in many types of food. If you have too much cholesterol in your blood, you will be at a higher risk to have a stroke or develop coronary heart disease which might lead to a heart attack.

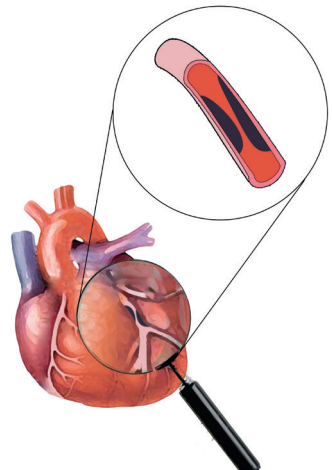
There are two kinds of cholesterol.

1. **LDL cholesterol:** "Bad" cholesterol. This carries cholesterol to your arteries and blocks them. High levels of LDL increase your risk of heart attack and stroke. The lower your LDL levels are, the better.
2. **HDL cholesterol:** "Good" cholesterol. This carries cholesterol away from your arteries and thus decreases the risk of a heart attack or stroke. The higher your HDL levels are, the better.

In general, you should check your cholesterol levels every four to six years. Your doctor will use these numbers to calculate your risk for heart disease and stroke and prescribe the best treatment.

Why is high blood cholesterol bad?

High blood cholesterol means you have too much cholesterol in your blood. The cholesterol builds up in your arteries, and over time, this makes the opening in the arteries smaller and smaller. If the coronary arteries that carry blood to your heart become narrowed, your heart will not get the necessary oxygen and nutrients that it needs. This is known as coronary heart disease. A heart attack occurs when these arteries are blocked and blood stops flowing to the heart. The higher your blood cholesterol levels are, the higher your chances of having heart disease. Similarly, high cholesterol levels can affect the arteries that carry blood to your brain. This will increase the risk of having a stroke.



How can I lower my cholesterol levels?

You should follow these steps to lower your blood cholesterol and have a healthy heart.

1. Follow a low saturated fat, low cholesterol diet.
2. Lose weight if you are overweight or obese.
3. Increase fiber sources in your diet.
4. Increase Omega-3 fatty acids in your diet.
5. Limit salt, sugar, alcohol, and caffeine.
6. Exercise regularly.
7. Quit smoking.

1. Follow a Low Saturated Fat, Low Cholesterol Diet

There are three main types of fat in foods. These fats increase your LDL cholesterol levels.

- **Saturated Fats**, also known as solid fats: They are the fats usually found in foods that are derived from animals. These include: fatty cuts of meat, chicken with the skin, butter, whole-milk dairy products such as whole milk, cheese, and labni. Saturated fats are also found in some plant sources such as tropical oils like coconut and palm oils. All the other vegetable oils are low in saturated fats.
- **Cholesterol**: A type of fat that is only present in animal products such as: liver, egg yolk, shrimps, milk butter, cheese, and other foods derived from animals.
- **Trans Fatty Acids**: A type of synthesized fat found in processed foods. These include biscuits, doughnuts, fast food, crackers, croissant, cookies, muffins, pizza dough, pie crusts, hamburger buns, some sticks of margarine and vegetable shortening, pre-mixed cake mixes, chocolate drink mixes, pancake mixes, snack foods including chips, candy, and packaged or microwave popcorn.

Saturated fats increase your LDL cholesterol levels the most. Eating too much cholesterol and saturated fats is the key reason for high blood cholesterol levels. All fatty foods have different mixtures of saturated and unsaturated fats. The best way to lower your blood cholesterol level is to select foods low in saturated fats. You can do this by choosing a healthy diet rich in fruits, vegetables, whole grain foods, fish, lean meats, and fat free dairy products.

a. Meat, Chicken, and Fish

Choose:

- Very lean cuts of red meat
- Skinless chicken and turkey
- Fresh or frozen fish (minimum 240 grams per week)
- More legumes and less meat, such as dry beans, chickpeas, lentils, etc.

Choose in moderate amounts:

- Shellfish (shrimps or calamari) and squid

Avoid Completely:

- Fatty cuts of meats
- Organ meats, such as liver, brain, and kidney
- Sausage and bacon
- Regular luncheon meat and all processed meats

b. Eggs

- Limit eggs to 2-3 times per week
- Egg whites are not limited

c. Dairy Products

Choose:

- Skim milk and skim milk yogurt
- Low-fat cheeses (<15%) and labni (<1%)
- Karisheh

Choose in moderate amounts:

- Low-fat milk and yogurt (2%)
- White cheese (reduce the salt in akkawi, halloum, double creme, baladi), mozzarella, feta
- Partly skimmed cheeses
- Low-fat ice cream and low-fat frozen yogurt

Avoid Completely:

- Whole milk (regular & condensed)
- Creamy cheese
- High-fat cheeses such as cheddar, brie, kashkawan, parmesan
- Sour cream
- Whipped cream and non-dairy creamers (unless fat free creamer)

d. Bread, Cereals, and Grains

Choose:

- Breads: preferably whole-wheat bread, Arabic bread, sandwich, buns, bagels, soy bread, and oats
- Pasta: plain or whole-wheat noodles, spaghetti, and macaroni
- All grains, rice, wheat
- Cereals preferably whole-wheat cereals

Avoid Completely:

- Croissant, butter rolls, doughnuts, cheese crackers, regular muffins
- Cheese mana'eesh and pizzas (unless prepared with low-fat cheese)

e. Fats and Oils

Choose:

- Unsaturated vegetable oils (olive, canola, corn, soybean, safflower, peanut, sesame oil)
- Avocado
- Pan coating spray
- Olives unsalted
- Unsalted roasted nuts & seeds (cashew, walnuts, almonds, pistachios, sunflower seeds)
- Fat free mayonnaise

Choose in moderate amounts:

- Low-fat mayonnaise

Avoid Completely:

- Butter or margarine (except those advertised as low in trans fats or trans fat free)
- Coconut oil, palm oil, lard, and ghee (samneh)
- Hardened hydrogenated fats, oils, and shortening
- Regular mayonnaise
- Fried foods

f. Fruits and Vegetables

Choose:

- All vegetables and fruits except coconut
- All fruit juices (preferably naturally squeezed)

Avoid Completely:

- Vegetables prepared in butter and cream
- Fried vegetables

g. Desserts, Snacks & Beverages (Avoid the intake of too many sweets)

Choose:

- Low-fat frozen desserts: such as sherbet, sorbet, frozen low-fat yogurt, gelatin desserts, puddings made with low or non-fat milk, ice cream labeled as "diet", and popsicles
- Low-fat cakes and cookies, low-fat and low-salt popcorn
- Low-fat candy such as jelly beans and hard candy
- Non-fat beverages such as carbonated diet drinks, light juices

Avoid Completely:

- High-fat frozen desserts such as ice cream
- Regular cakes
- All Arabic sweets
- Commercial cookies and pies
- Buttered pop corn
- Chocolate bars
- High-fat beverages such as milkshakes

Tips on how to cut down on fat while cooking.

1. Cook the chicken or other poultry after removing the skin.
2. Choose the breast of the chicken over the thigh.
3. Trim the meat by removing visible fat before cooking.
4. Cool the broth produced by boiling meat or chicken, and skim off the top fatty layer.
5. Cook vegetables and food without any fat, and flavor with spices, garlic, onions, celery, dry mint, dry herbs, lemon juice, balsamic vinegar, etc.
6. Boil, roast, or grill lean meat, fish, or chicken instead of frying it.
7. Use a pan coating spray for oven baking or spread the pan with oil using cotton.
8. If frying is necessary, use minimal amounts of vegetable oil (for example: canola oil).
 - a. Pour the fat from the pan and throw it away.
 - b. Drain fried food on paper towels before serving.
9. Separate the fat from the drippings before making gravies.

2. Lose Weight if Overweight or Obese

A healthy life is closely linked to a fit body weight (a healthy fat mass and waist circumference). Change your eating habits and increase your physical activity, as allowed by your doctor, to reach and maintain a proper body weight. **Know your Body Composition!**

3. Increase Fiber Sources in Your Diet

A healthy diet (low in saturated fats, low in cholesterol, high in fiber) can lower blood cholesterol, prevent heart diseases, and protect against other diseases such as diabetes. It is recommended to eat at least 25-30 grams fiber/day. To do this, follow the below recommendations.

- Eat raw fruits and vegetables as their fiber content is higher than cooked or canned foods or juices. Do not peel the skin if possible.
- Cooking, peeling, pureeing, and processing may decrease fiber content. Keep vegetable skin whenever possible.
- Dried fruits are also good sources of fiber.
- Increase fiber in meat dishes by adding any type of dried beans, lentils, chickpeas, bran, or oatmeal. Legumes are good sources of protein and can be consumed on their own without meat.
- Choose whole wheat breads, bagels, bran cereals, whole wheat pasta or rice, oats, etc.
- Nuts and seeds, such as roasted unsalted peanuts, almonds, cashews, sesame, and sunflower seeds are good sources of fiber. Moderate amounts should be taken if weight reduction is required.
- Increase fiber intake gradually as it may cause gases, bloating, cramping, or diarrhea.
- Drink fluids, at least 8 cups every day, unless fluid restriction is recommended by your doctor.

4. Increase Omega-3 in Your Diet

Many studies have shown that a healthy diet rich in Omega-3 can lower your blood cholesterol and help you prevent heart diseases. You might benefit from Omega-3 supplements depending on your case. You will need to ask your doctor.

Choose Omega-3 rich food at least twice per week.

These include:

- Sardines
- Mackerel
- Salmon
- Herring
- Flaxseed oil
- Flaxseed seeds
- Fish oil
- Caviar (red and black)
- Nuts
- Walnuts
- Rocket
- Purslane

5. Limit Salt, Sugar, Alcohol, and Caffeine

- Decrease your sodium (salt) intake in your diet.
- Limit the added sugar to no more than 6 tsp per day for females and 9 tsp per day for males.
- If you drink alcohol, limit your daily intake to 1 drink for females and 2 drinks for males.
- Avoid drinking more than 2-3 caffeinated drinks per day.
- Caffeine is found mostly in Turkish or American coffee, black tea, Cola soft drinks, energy drinks, Matte, and chocolate.

6. Exercise Regularly (if your doctor approves)

- Regular physical activity helps in lowering LDL cholesterol and raising HDL cholesterol levels.
- Regular physical activity is necessary to promote weight loss and weight maintenance.
- Do moderate aerobic exercises (like brisk walking) at least 40 minutes per day, 3 to 4 days per week, to help control your blood pressure and improve the blood cholesterol levels.
- There are many physical activities you can engage in to maintain a healthy lifestyle. Plan activities that you will enjoy regularly.

7. Quit Smoking

- Smoking lowers your HDL (good) cholesterol. It makes your coronary arteries more at risk to build up cholesterol.

For more information, please contact the Department of Clinical Nutrition at +961-1-759668. To make an appointment with the dietitian, please call 1545 or +961-1-355500.

This educational material provides general information only. It does not constitute medical advice. Consult your health care provider to determine whether the information applies to you.

