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High Cholesterol in blood



How does high cholesterol happen?

High blood cholesterol is a condition in which you have too much cholesterol in your blood.

High levels of cholesterol in the blood can increase your risk of heart disease and cause plaque, which can narrow your arteries or even block them.



What are the types of cholesterol?

High-density lipoprotein (HDL):

Sometimes called **good** cholesterol. HDL protects you against heart disease by carrying the extra cholesterol out of your arteries, which lowers your chance of having a heart attack or stroke.

Low-density lipoprotein (LDL):

Sometimes called **bad** cholesterol. LDL leads to a build-up of bad fat in the artery walls, which can lead to chest pain, heart disease, heart attack, stroke, and kidney and circulation problems.



How to improve your cholesterol?



Diet:

Limit as you can ...

Limit Saturated fat and Substitute with Unsaturated fat

Saturated fat is usually solid at room and refrigerator temperatures.

It is found in greatest amounts in foods from animals, such as fatty cuts of meat, poultry with the skin and whole milk dairy products, as well as in some vegetable oils, including palm oils.



How to improve your cholesterol?



Diet:

Limit as you can ...

Unsaturated fat, this fat is usually liquid at room and refrigerator temperatures.

Unsaturated fat occurs in vegetable oils, most nuts, olives, avocados, and fatty fish, such as salmon.

Instead of butter or stick margarine, try reduced-fat or liquid spreads.



How to improve your cholesterol?



Diet:

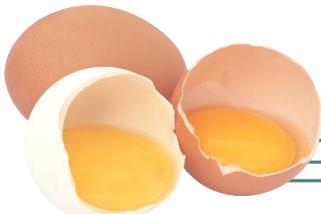
Limit as you can ...

Limit Trans Fat

Found mostly in stick margarine, shortening, some fried foods, and packaged foods made with hydrogenated oil.

Limit the amount of cholesterol that you eat to less than 200

milligrams (mg) per day Food high in cholesterol include egg yolks (one egg yolk has about 212 mg of cholesterol), fatty meat, whole milk, cheese, shrimp, lobster, and crab.



How to improve your cholesterol?



Diet:

Eat more from ...

Soluble Fiber Comes from plants, Foods high in fiber can help reduce your risk of heart disease. It is also good for your digestive tract and for overall health. Choose whole grains product and breakfast cereals such as oatmeal and oat bran that have 3–4 grams of fiber per serving and add a banana, peach, apple, berries, or other fruit to your cereal, also add beans, or lentils to salads.

Omega-3 fats (heart healthy fats) Good choices include salmon, tuna, and sardines. Aim to eat fish twice a week. Other foods with omega-3 fats include walnuts and canola and soybean oils, flaxseed is another source of omega-3 fats. Have it as oil or ground.



What food are recommended to eat?

Food Group	Recommended Food
Grains	<ul style="list-style-type: none">- Brown rice.- Low-fat crackers and pretzels.- Whole grain breads and cereals, including oats and barley pasta, especially whole wheat or other whole grain types.
Vegetables	<ul style="list-style-type: none">- Fresh, frozen, or canned vegetables without added fat or salt.
Fruits	<ul style="list-style-type: none">- Fresh, frozen, canned, or dried fruit.



What food are recommended to eat?

Food Group	Recommended Food
Milk	<ul style="list-style-type: none">- Nonfat (skim) or low fat- Nonfat or low-fat yogurt or cottage cheese- Fat free and low fat cheese
Meat and Other protein foods	<ul style="list-style-type: none">- Lean cuts of beef- Skinless poultry- Fish- Dried beans and peas- Nuts and nut butters- Meat alternatives made with soy or textured vegetable protein- Egg whites or egg substitute.



What food are recommended to eat?

Food Group	Recommended Food
Fats and oils	<ul style="list-style-type: none">- Unsaturated oils (olive, peanut, soy, sunflower, canola)- Soft or liquid margarines and vegetable oil spreads- Salad dressings- Seeds and nuts- Avocado



What food are not recommended to eat?

Food Group	Recommended Food
Grains	<ul style="list-style-type: none">- High-fat bakery products, such as doughnuts, biscuits, croissants, Danish pastries, pies, cookies.- Snacks made with partially hydrogenated oils, including chips, cheese puffs, snack mixes, regular crackers, butter-flavored popcorn
Vegetables	<ul style="list-style-type: none">- Fried vegetables- Vegetables prepared with butter, cheese, or cream sauce.



What food are not recommended to eat?

Food Group	Recommended Food
Fruits	<ul style="list-style-type: none">- Fried fruits- Fruit served with butter, or cream sauce.
Milk	<ul style="list-style-type: none">- Whole milk- Whole yogurt or ice cream- Cream- Cream cheese- Sour cream- Cheese



What food are not recommended to eat?

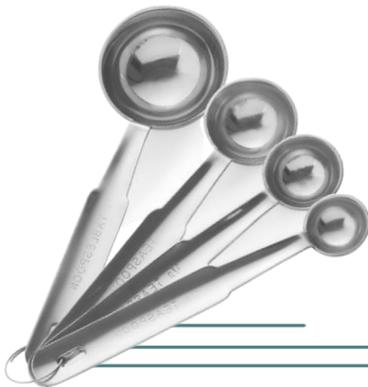
Food Group	Recommended Food
Meat and Other protein foods	<ul style="list-style-type: none">- Higher-fat cuts of meats- Poultry with skin- Hot dogs- Organ meats (liver, brains, sweetbreads)- Fried meat, poultry, and fish- Whole eggs and egg yolks
Fats and oils	<ul style="list-style-type: none">- Butter- Stick margarine- Partially hydrogenated oils- Tropical oils (palm and coconut)



What are the cooking tips?

Here are some tips to help keep your kitchen low in fats:

- Use a rack to drain off fat when you broil, roast or bake.
- Broil or grill instead of pan-frying.
- Cut off all visible fat from meat before cooking, and take all the skin off poultry pieces.
- Use a vegetable oil spray to brown or sauté foods.
- Serve smaller portions of high-calorie foods.
- Add lots of colorful veggies to your salad — carrots, broccoli and cauliflower are high in fiber
- Choose breads that list the word “whole” as part of the first ingredient, such as “whole wheat flour”.



What are the cooking tips?

- **Weight management :**

Excess weight tends to increase your LDL level. In addition, it typically raises triglycerides.

Losing the extra pounds may help lower your LDL and triglycerides, while raising your HDL

- **Physical activity:**

An important part of getting healthy is increasing the amount of physical activity you get each week. 40 minutes of physical activity 3 to 4 times per week, help lower LDL and total cholesterol.



What are the cooking tips?

- **Read the Label**

You can use the label to compare foods and find ones lower in saturated fat, trans fat, total fat, cholesterol, and calories.

Nutrition Facts		
Serving Size 1 cup (228g) Servings Per Container 2		Start here
Amount Per Serving		Check calories
Calories 250 Calories from Fat 110		
	% Daily Value*	Quick guide to % DV
Total Fat 12g	18%	5% or less is low 20% or more is high
Saturated Fat 3g	15%	
Trans Fat 3g		
Cholesterol 30mg	10%	Limit these
Sodium 470mg	20%	
Potassium 700mg	20%	Get enough of these
Total Carbohydrate 31g	10%	
Dietary Fiber 0g	0%	
Sugars 5g		
Protein 5g		
Vitamin A	4%	
Vitamin C	2%	
Calcium	20%	
Iron	4%	Footnote
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.		
	Calories:	2,000 2,500
Total Fat	Less than	65g 80g
Sat Fat	Less than	20g 25g
Cholesterol	Less than	300mg 300mg
Sodium	Less than	2,400mg 2,400mg
Total Carbohydrate		300g 375g
Dietary Fiber		25g 30g

Sources and references:

- American Heart Association (2014) Understanding and Managing High Cholesterol and the Importance of Managing Coronary Heart Disease, Available at:https://www.google.com.sa/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjV6_H36LnRAhXEO RQKHVjnDBMQFggfMAA&url=https%3A%2F%2Fwww.heart.org%2Fidc%2Fgroups%2Fheart-public%2F%40wcm%2F%40hcm%2Fdocuments%2Fdownloadable%2Fucm_466865.pdf&usg=AFQjCNFmmdN4Oo7omzmN9T6E FWC1eepoRA(Accessed: 8th January 2017).
- National Cholesterol Education Program, NHLBI Obesity Education Initiative (2005) Your Guid To Lowering Your Cholesterol

Sources and references:

- Academy of Nutrition and Dietetics , nutrition care manual 2021 – 2022
- All illustration used are from Canva.com

Review and audit:

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Health Awareness Unit

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