



Eating Guidelines for People with High Blood Cholesterol Levels

Your diet and exercise habits can affect your blood cholesterol levels.

Cholesterol is a fatty substance that is found in your blood and body cells. It is needed in small amounts to make hormones and help with digestion. Cholesterol is not an essential nutrient as your liver can make what it needs.

High blood cholesterol levels are a risk factor for heart disease.

Total blood cholesterol contains two types of cholesterol:

- Low Density Lipoproteins (LDL) or "bad cholesterol" can form plaque (atherosclerosis) on your artery walls and block blood flow to your heart and brain. Aim for low LDL levels.
- **High Density Lipoproteins (HDL) or "good cholesterol"** helps remove LDL cholesterol from your arteries. **Aim for high HDL levels.**

This fact sheet provides healthy eating tips to improve your blood cholesterol levels. This will help to decrease your risk for developing, or worsening, your heart disease and risk of stroke.



Steps you can take

- Aim for a healthy body size.
 - If you carry extra weight losing weight can improve your blood cholesterol levels.
- Choose your fat sources wisely.
 - Choose foods that are lower in saturated fat. Examples include:
 - Lean cuts of meat, such as beef or pork tenderloin, centre cut pork loin, lean or extra-lean ground beef, pork or skinless

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poultry (especially white meat). A portion is about a ¼ of a plate or a small chicken drum stick leg. Consider meat alternatives like legumes (peas, beans and lentils) and tofu a couple times a week.

- Low fat milk (skim, 1%), yogurt (0%, 1%, 2%) and milk alternatives like cheese with less than 20% milk fat (M.F.).
- Include small amounts of unsaturated (monounsaturated or polyunsaturated) fats in your diet. Examples include:
 - Canola, corn, olive, peanut, safflower, soybean and sunflower oil.
 - Salad dressing and mayonnaise made with unsaturated fats and seed butter.
 - Unsalted nuts and their butters, such as almond and almond butter and unsalted peanuts and peanut butter.
 - Unsalted seeds like chia, pumpkin, sesame and sunflower seeds.
 - Soft, non-hydrogenated margarine.
 - Avocados.
 - Fish, including fatty fish containing healthy omega-3 fats such as herring, mackerel, salmon, sardines or trout.
- Eat less high fat foods, especially those high in saturated fat and that contain trans fat. Examples include:
 - Fried foods, such as deep fried chicken nuggets, French fries and donuts.
 - Processed meats like sausage, salami and hot dogs.
 - Ready-to-eat and processed frozen prepared foods such as creamy salad dressings, chicken and meat pies, spring rolls, pizza and waffles.
 - Snack foods such as chips, nachos, cheese puffs and crackers.
 - Store bought baked goods such as pastries, croissants, muffins, cookies and pie.
 - · Ice cream and frozen desserts
 - Margarine and vegetable shortening made with hydrogenated oils.

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- Butter, lard, coconut, palm or palm kernel oil.
- Prepare your own meals and snacks as much as possible using healthy cooking methods like baking, poaching, steaming, broiling, roasting and stir-frying in small amounts of unsaturated oil or fat.
- Eat foods high in fibre, especially soluble fibre.
 - Aim for at least 10 g of soluble fibre and 25-29 g of total fibre per day.
 - Food sources include legumes (such as black, lima, navy, pinto and kidney beans and chick peas), psyllium, whole grains such as oats, oat bran, quinoa, barley, and some vegetables and fruit.
 - Add up to 50 g (5 Tbsp) of whole or ground flaxseed to cereal, soup, casseroles and baking each day.

· Include soy protein in your diet.

- Aim for 30 g per day.
- Sources include soy beverages, soy nuts, edamame, soy yogurts, tofu or tempeh and textured vegetable protein (TVP) that can be cubed or crumbled into soup, salad, stir-fries and tomato sauces.

• Include nuts in your diet.

- Aim for 60 mL (¼ cup) of plain, unsalted nuts at least five times a week.
- Try unsalted almonds, cashews, hazelnuts, peanuts, pecans, pistachios and walnuts.
- Eat them as a snack, add them to main dishes or salads or use them in baking.
- Nuts are high in calories, so watch the portion size.

Select foods that contain plant sterols.

- While small amounts of plant sterols occur naturally in whole grains, nuts, vegetables and fruit, they don't provide enough to reach the recommended 2 g per day level.
- Only a few foods, such as some margarines and juices, may be fortified with plant sterols. Consider taking a supplement if product availability is limited.
- Check the product label for these terms: phytosterol, plant sterol or sterol esters.

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- Plant sterols are not advised for children under five years, pregnant, and breastfeeding women.
- Limit dietary cholesterol to 200 mg or less per day.
 - Dietary cholesterol comes from animal products like meats, poultry, shellfish, butter, egg yolks and milk products.
 - To help keep you under this level:
 - Limit egg yolks to less than two per week, especially if you eat a meat and milk based diet.
 - Choose smaller portions of meat, fish, and poultry.
 - Eat more plant-based foods including legumes (beans, peas and lentils) and tofu.

Other Tips

- Read food labels carefully to choose products lower in saturated fat, cholesterol, sugar and higher in dietary fibre.
- **Use the Eat Well Plate** to help you put these tips into action when planning your meals and snacks for the day.
- Try following the Mediterranean or Portfolio diet. These diets include all of the dietary advice listed above and more. Research shows that these diets help to lower cholesterol levels.
- Be physically active.
 - Aim for at least 150 minutes (2½ hours) of aerobic physical activity each week. Do activities that you enjoy. Examples of aerobic activities include brisk walking, swimming or biking. You can break 30 minutes into three 10 minute sessions, if needed.
 - Muscle and bone strengthening activities such as lifting weights, using resistance bands or doing heavy yard work are also beneficial. Aim to add these kinds of activities at least two days per week.
 - See the Canadian Physical Activity Guidelines for more information.
 - Participating in physical activity is generally safe. If you have not been active, start slowly. Check with a health care provider before becoming more active.

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Special Considerations

Triglycerides are another type of fat in your blood. High triglyceride levels can also increase your heart disease risk. If you have high triglyceride levels:

- Aim for a healthy body size.
- Eat more omega-3 fats, especially from fatty fish like mackerel, salmon and trout, and omega-3 enriched foods. Talk to your health care provider about taking an omega-3 (DHA/EPA) supplement.
- Avoid sweetened foods and beverages like cakes, donuts, soda pop and fruit drinks.
- Limit alcohol to no more than 1-2 drinks per day, or don't drink at all. Even one drink can increase triglycerides in some people.



Additional Resources

- Assess your BMI http://www.dietitians.ca/Your-Health/Assess-Yourself/Assess-Your-BMI.aspx
- Learn how to measure your waist size http://www.heartandstroke.ca/get-healthy/healthy-weight/healthy-weight-and-waist
- Physical Activity Sheets http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pa-ap/04paap-eng.php
- Mediterranean Diet A Guide to Healthy Eating
 http://www.pennutrition.com/
 http://www.pennutrition.com/
- Food Sources of Soluble Fibre <a href="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMzuXgE=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMzuXgE=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMzuXgE=&PreviewHandout=bA==
- Eating Guidelines for Omega-3 Fats <a href="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMbrUAM=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMbrUAM=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMbrUAM=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMbrUAM=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMbrUAM=&PreviewHandout=bA=="http://www.pennutrition.com/viewhandout.aspx?Portal=RbCR&id=JMbrUAM=&PreviewHandout=bA=="http://www.pennutrition.com/"http://www.pennu
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• Reading Food Labels https://www.canada.ca/en/health-canada/services/understanding-food-labels.html

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