

EATING PLAN FOR HIGH CHOLESTEROL (HYPERLIPIDEMIA)

This plan will limit your intake of saturated fat, trans fat and cholesterol while increasing fruit, vegetables and whole grains.

Cholesterol Defined

A serum lipid test is a measure of your blood cholesterol levels. Your blood sample will be measured for four different components. The total cholesterol, triglycerides, low density lipoprotein (LDL or bad cholesterol) and the high density lipoprotein (HDL or good cholesterol) are reported to your doctor. These levels are compared to target values appropriate for reducing your risk for heart disease. If your values are not at target, improving eating habits, becoming more active, avoiding smoking and taking medications can improve your cholesterol values.

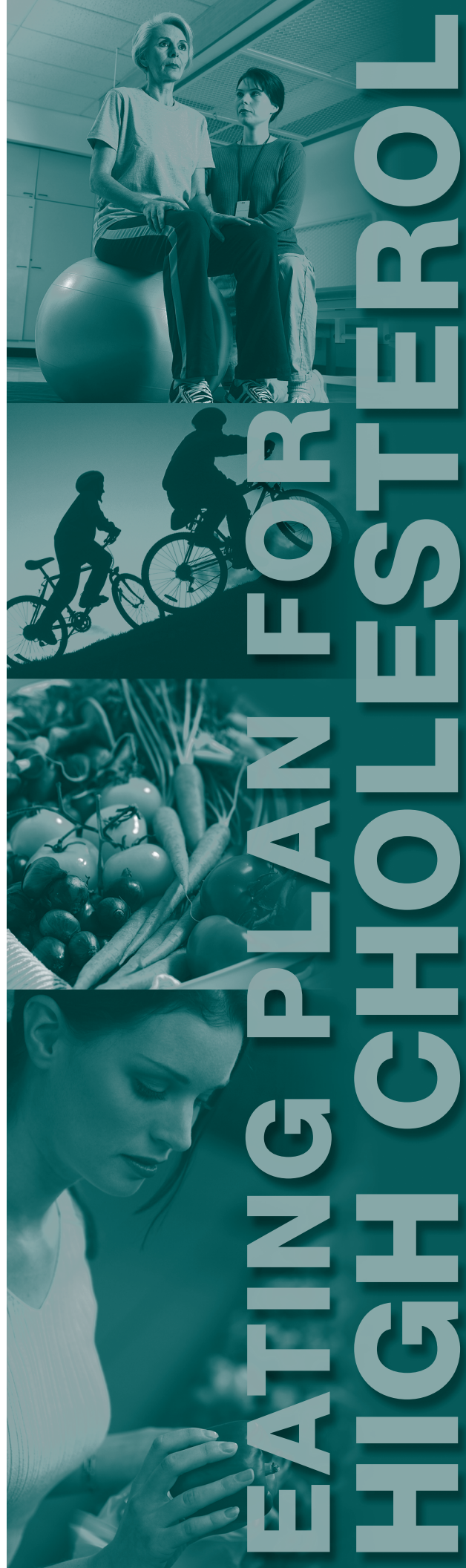
10 Tips to Help Reduce Your Cholesterol Levels

1. Eat plenty of vegetables and fruits - 7 servings or more each day
2. Eat whole grain foods rich in soluble fibre – oats, psyllium and barley
3. Include 2 Omega 3 rich fish meals per week – salmon, trout, sardines
4. Include 2 bean based meals per week – kidney beans, chickpeas, lentils
5. Eat nuts such as almonds and walnuts – small portions 5 times a week
6. Improve the quantity and quality of fats you eat
7. Oils are best for added fat – use small amounts, avoid frying
8. Be active – move your body 30 minutes each day
9. If you are overweight, work to reduce your weight by 10%
10. If your triglycerides are high, limit sugars and alcohol.

Cholesterol Facts

- High cholesterol can increase your risk of heart disease.
- Cholesterol in your blood comes from what your liver produces and what you consume in your diet. High levels of cholesterol in your blood can enter the lining of your arteries and form deposits or “plaques”. These plaques can grow overtime and block the flow of blood in your arteries. This puts you at risk for a heart attack or stroke.
- Making changes to your eating to lower your intake of saturated fat, trans fat and cholesterol, while increasing fibre, can lower your cholesterol by as much as 35%.

Build a healthy heart from the ground up – an eating plan based on fruit, vegetables, whole grains, nuts and legumes with lean protein choices is the foundation for managing your cholesterol.



EATING PLAN FOR HIGH CHOLESTEROL

Healthier Eating Guidelines for Lowering Cholesterol

- **Focus on Quantity and Quality of Fat**
 - **Quantity** – 1/4 to 1/3 of your calories can come from fat. This means that you can eat between 50 to 70 grams of fat each day. The number of fat grams that are right for you may be less or more than this depending on your gender, activity level and weight goals. A Registered Dietitian can help determine how much is right for you.
 - **Quality** – unsaturated fats support a healthy cholesterol profile. These fats are liquid or soft solid at room temperature. Oils like olive oil, canola oil, soy oil and non-hydrogenated margarines are great quality fats. Use in moderation. One teaspoon of oil, the size of your thumb tip, adds 5 grams of fat.
- **Limit saturated and trans fats, or hard fats, to 15 grams or less per day.** These fats are found in full fat dairy products, meats, poultry skin, lard, palm kernel oil, hydrogenated oils and baked goods made with these fats and oils.
- **Eat less cholesterol – aim for less than 300 mg of cholesterol per day.** Cholesterol is found only animal foods. Reducing portions of meat, avoiding high fat cuts of meat and choosing lower fat dairy choices will help.
- **Eggs** – Recent studies have shown that eating an egg a day will not increase cholesterol or risk for heart disease. However, if you have diabetes you should limit your egg consumption to no more than 6 eggs per week.
- **Nuts such as almonds, walnuts, pecans and pistachios can help lower cholesterol.** Studies show 1.5 oz or about 36 almonds 5 days per week helped reduce bad cholesterol. If you are working to lose weight a smaller portion of 10-12 nuts is recommended.

Fibre – yes, for your heart!

Fibre is found in plant based foods. Vegetables, fruit, whole grains, nuts, seeds, beans, peas and lentils are all great fibre sources. Functional or “soluble” fibre helps to reduce cholesterol by binding with cholesterol in your stomach and bowel. This cholesterol is then eliminated in your stool. Studies show we should include 10 to 25 grams of this fibre each day. Here is a list of the soluble fibre foods and the grams of fibre they provide.

Item	Soluble Fibre (g)	Item	Soluble Fibre (g)
Barley (1/2 c)	1	Navy Beans (1/2c)	2
Oatmeal (1/2 c)	1	Chickpeas (1/2 c)	1
Oat bran (1/2 c)	2	Carrots	1
Apple	1	Brussels Sprouts	3
Citrus (oranges)	2	Psyllium Seeds (1 Tbsp)	5
Pears	2	Metamucil (1 tsp)	2
Kidney Beans (1/2c)	3	All Bran Buds (1/3c)	2

Heart Health Mixture = 1/3 ground flax, 1/3 oat bran, 1/3 psyllium.

Use 2tbsp each day added to your food. It mixes well with yogurt, hot cereal and salad dressing.

Salt – Shake the Habit

Tips to reduce salt (sodium) intake:

- **Home prepared fresh or frozen foods are best.** If using canned foods, look for labels such as “no added salt” or “low sodium”.
- **Avoid adding salt** to your food and omit from recipes where possible.
- **Season your food with herb and spice blends.** Check ingredient lists to avoid those with salt.
- **Limit condiments such as ketchup, mustard, soy sauce etc.**
- **Use Nutrition Facts Labels.** Best choices have less than 200 mg sodium per serving. Avoid packaged food with more than 400 mg of sodium per serving. Check labels carefully.
- **Use ingredient lists** - foods listing salt or sodium at the beginning of the list or multiple times in the list are high in salt.
- **Restaurant foods are often high in sodium.** Try to avoid fast food but do use the restaurants’ Nutrition Information to identify lower sodium options. When eating out, ask your server if the meal can be prepared without added salt. Request sauces on the side.

Omega-3 Fats

Omega 3's are unsaturated fats found in cold water fatty fish (salmon, mackerel, arctic char, sardines, trout and herring) and in plant foods including walnuts and flax seeds. The "fish" omega-3's are commonly known as EPA and DHA. The "plant" omega-3's are known as ALA. ALA is converted to EPA and DHA in your body. Food should be your first choice to achieve your omega 3's (see below). Aim to eat 2 meals including fish each week and use the **Heart Health Mixture** as noted on the previous page. If you have heart disease or your triglycerides are high, your doctor or dietitian may recommend an Omega 3 supplement.

OMEGA 3 CONTENT OF FOODS					
Fish (2.5 oz)	EPA/DHA (mg) per serving	Nuts/Seeds/Oils	ALA (mg) per serving	Enriched Foods	Total Omega -3 (mg) per serving
Herring	1600	Almonds (1/4 c)	150	Milk + DHA (1 c)	20
Mackerel	1490	Wheat Germ (27 g)	190	Soy beverage + flax	700
Salmon	1300	Canola Oil (1tsp)	430	Eggs + DHA (2)	800
Sardines	1050	Soybeans	760	Omega 3 yogurt (3/4 c)	500
Trout	870	Flaxseed, ground (1Tbsp)	1600		
Arctic Char	680	Tofu (3/4c)	2020		
Tuna, white (canned)	650	English Walnuts (1/4 c)	2300		

If you have High Triglycerides

In addition to the guidelines for managing your cholesterol, you may benefit from the following recommendations:

- **Alcohol:** Men - limit to less than 2 drinks per day or 14 per week. Women – limit to 1 drink a day or 9 per week.
- Depending on your triglyceride level, your doctor may ask that you further reduce this amount.
- **Sugars** - reduce added sugar e.g. table sugar, syrup, jam, honey, molasses. Limit juice, pop, candies, sweets, chocolate and baked goods.
- If you have diabetes, work with your healthcare team to improve your blood glucose (sugar) control
- **Omega 3 supplements** – adding 2000 to 4000mg of EPA+DHA from fish oil. This should be done under the supervision of your doctor
- **Niacin by prescription** – this B vitamin may be recommended to lower your triglycerides. It also helps raise HDL (good cholesterol)

Reducing alcohol can promote weight loss and help decrease triglyceride levels.

Decoding Food Labels

Nutritional Facts			
Per 125 mL (87 g)			
Amount	% Daily Value		
Calories 80			
Fat 0.5 g			1 %
Saturated 0.5 g + Trans 0g			0 %
Cholesterol 0 mg			
Sodium 0 mg			0 %
Carbohydrate 18 g			6 %
Fibre 2 g			8 %
Sugars 2 g			
Protein 3 g			
Vitamin A	2 %	Vitamin C	10 %
Calcium	2 %	Iron	2 %

The Nutrition Facts table found on the side of packaged food can help you make better food choices. Always check the serving size first and consider this in relation to how much of the food you usually eat.

Look for choices with less fat, saturated fat, cholesterol and sodium. Look for choices that give you more fibre.

Learn more about using food labels to make healthy choices on the web:

Health Canada – www.hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/index-eng.php

Healthy Eating Is In Store for You – www.healthyeatinginstore.ca

To Reduce Weight

- Eat smaller portions of foods and remember the balance of foods on your plate: 1/4 protein, 1/4 starch (including potatoes), 1/2 vegetables
- Eat 3 meals per day, no more than 6 hours apart. Don't skip meals. Snack with fruit between meals.
- Choose foods lower in fat and sugar. Eating strategies including low glycemic index choices can be helpful. Learn more from a registered dietitian.
- Aim for a maximum weight loss of 1-2 lbs (0.5 -1 kg) per week.
- "Waist loss" is as important as weight loss. For tips on how to trim your waist see our Waisting Away nutrition fact sheet.

For a more detailed plan for weight loss please read Waisting Away - Healthy Weight Management available in our clinic or on the web at www.ottawacvecentre.com

Portions to Live By

- One serving of whole grains is 1/2 cup cooked, not the 3 or more cups served in most restaurants! Too much of a good thing is not a good thing.
- For more details on healthy portions see **Eating Well with Canada's Food Guide** on-line at www.healthcanada.gc.ca/foodguide.



Breakfast



Lunch & Supper

Prepare for Success

- Cook without adding fat – bake, broil, roast, barbeque, grill, steam
- Limit pan frying and avoid deep fat frying
- Try using 1/3 less fat than your recipe calls for
- Add flavour to food with herbs and spices – think garlic, lemon, ginger and more
- Refrigerate soups and stews and skim off fat when solid
- Use a spray of oil to prevent sticking and add flavour

Food and Medication Interactions

Review your medications with your Doctor, Dietitian or Pharmacist.

- Caution with grapefruit, grapefruit juice, pomelos and Seville oranges. Certain medications for cholesterol and heart disease interact with these foods.

Supplements for Cholesterol Control

Check with your Doctor, Dietitian or Pharmacist before starting a supplement.

- **Heart Healthy Mixture** = 1/3 ground flax, 1/3 oat bran and 1/3 psyllium. Use 2 Tablespoons per day added to foods or beverages.
- **Omega 3 supplements**
 - if you have heart disease: 1000 mg per day as EPA + DHA
 - if your triglycerides are elevated: 2000 to 4000 mg per day (under the supervision of your doctor).
- Plant Sterols – consuming 2 grams of plant sterols per day from enriched foods, such as margarine with plant sterols, has been shown to reduce LDL cholesterol.
- Red yeast rice can be effective at lowering cholesterol but these products are unregulated. Their content is unreliable and therefore they are not recommended for use.
- Supplements of garlic, soy and lecithin do not appear to reduce cholesterol based on current research.
- Lecithin does not appear to reduce cholesterol.
- Coenzyme Q10 – evidence to date does not show that Co Q10 reduces muscle pain associated with cholesterol lowering medications.

Move your body, lower your bad cholesterol, raise your good cholesterol

- Including at least 30 minutes of brisk activity, such as walking, four (4) or more days per week can lower your LDL and raise your HDL.
- Start with a brisk 10 minute walk a few times per day and increase gradually from there.
- Gentle stretching exercises increase your flexibility and release tension in your muscles and joints. Aim for 4 or more stretching sessions per week.
- Strength exercises improve muscle and bone density keeping you strong and stable. Include these 2-4 times per week.
- Remember to start slowly and consult your physician before starting a new exercise program

Keeping active can lower your blood sugar, cholesterol, blood pressure, help you feel better, relieve tension and stress, improve your muscle tone and help you lose weight!

Eating Plan for High Cholesterol

Cholesterol lowering – maximum 15 mg of saturated fat per day, 300 mg of cholesterol
Read food labels for less fat, saturated fat, cholesterol and sodium and more fibre.

Note: Underlined foods are commonly higher in salt (sodium) – limit use in cases of hypertension or other condition requiring salt restriction.

FOODS TO CHOOSE

Vegetables and Fruit

- Fresh and frozen are best
- Unsweetened canned fruit, unsalted canned vegetables
- Limit fruit juice with elevated triglycerides
- Low sodium vegetable juice
- Avocados and olives in moderation for healthy fat

FOODS TO LIMIT OR AVOID

- Vegetables prepared with butter, cream or sauce; battered and deep fried
- Fruit packed in heavy syrup or sugar; sweetened fruit juice, fruit drinks, sports drinks

Whole Grains

- bread, buns, rolls, pita bread, English muffins and tortillas
- low fat crackers, breadsticks, melba toast, soda crackers (unsalted tops)
- Unsweetened hot or cold cereal – oats, oat bran, psyllium for soluble fibre
- Brown rice, barley
- Whole grain pasta
- Low fat baked goods – add oat bran, ground flax to boost fibre
- Avoid “white” products
- Cheese or egg bread, croissants, sweet rolls
- Crackers over 5 grams of fat per serving, commercial crumb coatings
- Sweetened cereals
- Pasta with butter, cream or cheese sauce, chow mien noodles, ramen noodles
- Commercial muffins, cakes, donuts, Danish, high-fat cookies

Beverages

- Water, soda water, mineral water
- Sugar-free soft drinks
- Coffee, Tea – limit to 4 cups per day
- Cereal beverages (e.g. Postum, Ovaltine)
- Regular tonic water
- Regular soft drinks, lemonade, sweetened iced tea, regular drink crystal mixes
- Flavored instant coffee
- Liqueurs, Cocktail mixes

Milk and Alternatives

- Any with 1% Milk Fat (MF) or less
- Cheese with less than 20% MF – occasional use
- All milk products which are more than 1% MF
- Cheese 21% MF or higher

FOODS TO CHOOSE

Meat and Alternatives

- Fish and shellfish: fresh, frozen-unbattered, canned in water
- Poultry: chicken, turkey – without skin
- Meat: lean cuts, fat trimmed
 - Beef: round, rump, sirloin, extra lean/lean ground
 - Veal: round, rump, tenderloin
 - Lamb: leg, loin, shank, lean ground
 - Pork: tenderloin, back bacon, ham
 - Deli Meat: ham, roast beef, pork, turkey, turkey or reduced fat wieners
 - Wild Game: moose, venison, rabbit
- Legumes: chickpeas, kidney beans, lentils, lima beans, soybeans, split peas, tofu
- Eggs: if you have diabetes, limit to 6 per week
- Nuts: unsalted almonds, walnuts, pecans, pistachios – limit 1/4 c per day
- Peanut butter: natural or non-hydrogenated or light
- Seeds: flax, pumpkin, sesame, sunflower

FOODS TO LIMIT OR AVOID

- Fish canned in oil, commercially fried, frozen battered fish
- Poultry: duck, goose, fried or battered chicken, chicken wings
- Meat: fatty marbled meats, ribs, medium/regular ground meat, organ meats, bacon, sausage (unless low fat), canned meats
- Deli meat: pate, bologna, salami, high-fat luncheon meats, wieners
- Peanut butter with hydrogenated oil

Fats and Oils

Limit added fats to 3 teaspoons per day.

- Oils: olive, canola, corn, peanut, sesame, soy, sunflower
- Margarine: non-hydrogenated soft (regular or light)
- Salad dressing/Mayonnaise: low calorie, calorie reduced, oil-free, homemade with recommended oils
- Low fat sour cream, cream cheese
- Gravy: defatted

- Hydrogenated or block margarine, butter, lard, shortening, suet
- Salad dressings made with cheese or regular sour cream
- “Tropical” oils: palm kernel, coconut
- Full fat gravy, cream sauces

Sweets

- Sugar: substitutes (e.g. sucralose,), low sugar jams, jellies, syrups
- Sugar free: candies, gelatins, gum
- Baked goods: low in sugar, fat and high fibre
- Frozen desserts: low fat, low sugar ice cream, ice milk, frozen yogurt and sherbet
- Cocoa powder

- Sugar – use in moderation
- Regular jams, jellies, syrups
- Regular candies, gelatins, gum
- Baked goods - regular cakes, pies, cookies - avoid “white” foods
- Frozen Desserts: regular ice cream, ice milk, frozen yogurt, sherbet
- Chocolate bars, chocolate

Snack Foods

- Popcorn: hot air popped or low fat microwave
- Pretzels, baked chips, rice crisps and cakes

- Popcorn – regular and high fat microwave, corn chips, potato chips, cheesies

Miscellaneous

- Condiments (ketchup etc), herbs, spices, vinegar, pickles
- Soups: prepared with skim milk or fat-free stock, bouillon, broth, consommé

- Soups - cream

Other Nutrition Fact Sheets Available:

Eating Plan for Hypertension
Eating Plan for Congestive Heart Failure
Eating Plan for Type 2 Diabetes
Waisting Away – Healthy Weight Management
Potassium Modified Eating Plan
Please visit www.cvtoolbox.com for more information

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