

DIET FOR HIGH CHOLESTEROL (HYPERLIPIDEMIA)

This Diet is Low in Saturated Fats, Trans Fats and Cholesterol while High in Whole Grains, Fruits and Vegetables. For expert nutritional advice, consult with a Registered Dietitian.

High Cholesterol Levels Defined

Hyperlipidemia is when you have some blood work done and your cholesterol is high. There are also other kinds of cholesterol such as LDL cholesterol (the 'bad' one) and HDL cholesterol (the 'good' one). Dyslipidemia is when your blood is taken to test for high cholesterol levels. Your total cholesterol may be normal but when we look further into the kinds of cholesterol ie. LDL, HDL and triglycerides (TG), these may be too high or too low. If this happens, this is called Dyslipidemia.

Tips To Help Reduce Your Cholesterol Levels

1. Eat high fibre foods: whole and multigrains as your major source of carbohydrates; soluble fibres such as oat bran, psyllium & barley are great.
2. Use unsaturated fats such as olive/canola oils & non-hydrogenated margarine; use these in their raw states. Try not to fry your food.
3. Eat an abundance of fruits and vegetables; 2 vegetables at lunch and 2 at supper; eat 2-3 fruits everyday; eat fruit as nutritious snacks.
4. Eat adequate amounts of omega-3 fatty acids; which are found naturally in darker fish such as salmon & tuna and ground flax seed. There are now omega-3 containing foods on the market such as omega-3 eggs, cheese, yogourt, milk and ice cream.
5. Eat lower glycemic index foods. These foods will help you lose weight, lower your bad cholesterol (LDL) and increase your good cholesterol (HDL). The Internet is a great source of information. Do a search for "glycemic index".
6. Regular physical activity. Do 30 minutes/day; walking is great!
7. A healthy body weight. If you are overweight, try to lose 10% of your present weight.

Cholesterol/Fat FACTS – Focus on fats and fibre

- High blood cholesterol can increase your risk of heart disease.
- Decreasing the amount of fat in your diet can decrease the amount of fats (cholesterol &/or triglycerides) in your blood. By changing your diet to lower fat foods (low saturated fats and trans fats) you can lower your risk of having heart disease.
- Changing the types of carbohydrates in your diet to higher grains (less refined foods) and higher soluble fibre can decrease your cholesterol.



DIET FOR HIGH CHOLESTEROL

HEALTHIER EATING GUIDELINES

Canada's Guidelines for Healthy Eating (1991) recommend that you eat more whole grain products, vegetables and fruit, and less fat, salt, alcohol, and caffeine. The Guidelines encourage the choice of lower fat dairy foods, leaner meat, and foods prepared with little or no added fat.

Healthier Eating Guidelines

- **Reduce your total fat intake (less than 25%-35%** of your daily calories). To achieve this, always try to choose low fat food and avoid fried food. Label reading will help you with this.
- **Eat monounsaturated or polyunsaturated fats.** Unsaturated fats lower blood cholesterol levels. Monounsaturated fats are found mostly in plant foods like olive oil, canola oil and peanut oil. Polyunsaturated fats are liquid at room temperature and usually of plant origin such as vegetable/seed oils (corn, safflower, sesame, soybean, and sunflower), soft margarines (non-hydrogenated).
- **Limit saturated fat to less than 10%** of your daily calories (including Trans fats). Saturated fats & trans fats raise blood cholesterol levels. Saturated fats are solid at room temperature and are usually of animal origin. Sources include: fats in meat, whole milk, dairy products, palm oil, coconut oil, solid shortening, hard margarines, and cocoa butter. Trans fats are usually found in baked and fried foods or any food containing a fat that has been heated/cooked. Hydrogenation produces trans fats. There are some trans fats in meats and dairy products but these are naturally occurring and are not as harmful to the body as trans fats formed through the hydrogenation of foods.
- **Omega-3 fatty acids** are found in cold water fish such as herring, mackerel, salmon, sardines, & tuna, and in flaxseeds (2 tbsp per day; freshly ground). Three to four servings per week of fish is recommended as part of a healthy, balanced diet. Dark green leafy vegetables are also a good source of omega-3 fatty acids, as well as omega-3 eggs and omega-3 enriched dairy products and other foods. Go to www.omegarich.com for more food sources.
- **Choose a soft tub non-hydrogenated margarine** and consume in MODERATION. Hydrogenation is a process that changes liquid (vegetable) oil into a solid fat such as margarine. The hydrogenation process changes some of the good fats into cholesterol raising saturated fats and trans fats.
- **Lower your intake of dietary cholesterol.** Dietary cholesterol is only found in animal products. Try to avoid high fat meat cuts, poultry skin and organ meats. Do not fry your foods.
- **Eggs:** *You can consume up to eight eggs per week; no more than two eggs per day. If you have very high cholesterol levels, these recommendations should be reviewed.* Consult with a Registered Dietitian for a meal plan.
- **Choose only lean meat and poultry.** Remove skin and trim fat before cooking. *Your meat portion should be about the size of a deck of cards (50-100 g. or 2-4 oz.).*
- **See the milk fat (MF) of all dairy products.** Use **skim or 1% MF milk products** & low fat cheese (less than 20% MF)

Fibre

- Increase fibre in your diet by eating more whole grain foods, vegetables, fruits, and legumes. These foods also contain vitamins and minerals (antioxidants) as well as both soluble fibre and insoluble fibre. Water soluble fibres such as oat bran, barley, legumes, gums, pectin, and psyllium, help reduce blood cholesterol. Eating whole fruit is best for soluble fibre. Try to drink no more than 1/2 cup fruit juice per day.

Fibre for Heart Care

- **Definition:** Soluble fibre has been shown to reduce cholesterol levels. It should be part of your diet on a daily basis.
- **Recommendation:** 10 grams of soluble fibre per day

Foods High in Soluble Fibre and Low in Saturated Fat:

- | | | |
|--|----------------------------------|-----------------------------------|
| • Barley, cooked, 125 ml – 8.1 g | • Pears, medium – 1.0 g | • Broccoli, 125 ml – 1.2 g |
| • Prunes, 125 ml – 3.9 g | • Banana, medium – 2.7 g | • Bread, multigrain – 0.5 - 1.0 g |
| • Flax seed, ground, 60 ml – 2.3 g | • Vegetables, whole, 1.0 - 1.4 g | • Legumes, 125 ml – 0.5 - 1.4 g |
| • Fruits, whole, medium, citrus – 1.1 - 1.9g | • Squash, 125 ml – 1.4 g | • Nuts (about 10) – 1.2 g |
| • Apple, medium – 1.0 g | • Corn, 125 ml – 1.3 g | |

- **Heart-Healthy Mixture:** 1/3 ground flax, 1/3 oat bran, 1/3 psyllium = 2 tbsp/day

Salt – Tips to reduce salt intake:

- If using salt in cooking, don't add it at the table.
- If adding salt at the table, taste first and use in moderation.
- Try seasoning with herbs and spices (without salt) i.e. fresh garlic or garlic powder instead of garlic salt.
- Reduce the amount of salt in recipes.
- Avoid processed foods that are high in salt (sodium chloride) such as canned or packaged foods and condiments.
- Watch for "Na" – sodium on the label.
- Check with your physician before using salt substitutes.
- Avoid deli-meats which have been cured such as bacon, ham, bologna and salami.

Alcohol

- Limit alcohol to less than two (2) drinks per day for men and one (1) drink per day for women (1 drink = 12 oz beer = 1 1/2 oz liquor = 4 oz wine).
- Red Wine: research indicates that it is good for heart disease. If you presently drink red wine, limit consumption to 3-5 oz/day. If you do not drink, don't start.

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

Caffeine

- Drink no more than four (4) cups of coffee or caffeine containing beverages per day.

Sugar – this may affect your triglyceride levels

- Limit sugars within your diet. These include sweets, candy, sugar, jam, honey, syrup, high fructose corn syrup, regular soft drinks and sweetened fruit drinks.
- Avoid sugar or foods that contain a lot of sugar. This is especially important if you are **overweight**, have high blood levels of sugar (**diabetes**) or **high triglycerides**.

Supplements – Ask your Doctor or Registered Dietitian before taking

Recommendations:

- Fish oils = omega-3 fatty acids - salmon is best - 600-900 mg per day of DHA/EPA (see charts below)
- Folic acid = 0.5 mg (milligrams) daily; combine with B12
- Niacin = 23 mg daily - do not start this without asking your doctor
- Phytosterols or plantsterols = 800 mg daily
- Psyllium = 7 grams per day - drink plenty of water
- B12 = 20 micrograms daily; combine with folic acid

OMEGA 3 CONTENT OF SOME FOODS AND FUNCTIONAL FOOD (CONTAINING OMEGA 3)

Fish	DHA/EPA Per 100g serving	Plant-based Foods (and portion size)	ALA (converts to DHA/EPA up to 4%)	Functional Foods (and portion size)	DHA/EPA
Mackerel	2,500 mg	Flax Seed (75 g)	17,000 mg	Naturelle Plus Ice Cream (125 ml)	30 mg
Salmon	1,200 mg	Walnuts (50 g)	3,000 mg	Omega Pro Eggs (100 g)	500 mg
Tuna	400 mg	Canola Oil (14 g)	1,400 mg	Omega 3 Shells (3)	165 mg
Herring	600 mg	Corn Oil (14 g)	Trace	Yoplait Yogurt (125 ml)	0 – is flax-based
Trout	500 mg	Vegetables	Trace	Dairy O Milk (250 ml)	Homo = 20 mg 2% = 10 mg
Halibut	400 mg	Nuts (75 g)	150 mg		
Cod	300 mg	Beans/Peas (75 g)	300 mg		
Shrimp	200 mg			Black Diam. Cheese (15 g)	10 mg

Note: When reading labels, recommendations are listed in mg servings; label claims must be in grams per Health Canada standards. This may lead to consumer confusion. You should read labels carefully for DHA/EPA contents. Many Omega 3 claims are flax-based (yogurt, cheeses) which contain **NO** DHA/EPA.

Food Labels

- Read food labels carefully. Try to reduce your saturated fat and trans fat intake.
- Avoid products that contain the items below as one of the first three ingredients:
 - hydrogenated vegetable shortening/oil; shortening or lard; coconut, palm, or palm kernel oils.

Food Preparation

- Use reduced-fat cooking methods such as barbecuing, broiling, roasting, and steaming. Indoor grills are great!
- Avoid pan frying and deep fat frying.
- Reduce the amount of fat in recipes (use 1/3 less fat).
- Avoid high fat marinades and sauces. e.g. cheese or cream sauces
- To add flavour to food use herbs and spices ; lemon is great!
- Refrigerate soups and stews overnight and skim off fat before serving.
- Use non-stick spray to enhance flavour of foods – try the different flavours (ie. butter-flavoured PAM)

DIET FOR HIGH CHOLESTEROL

FOODS TO CHOOSE MORE OFTEN

Whole Grain Products

Breads: whole wheat and multigrain bread, buns, rolls, bagels, pita bread, English muffins, and tortillas

Crackers: low-fat e.g. breadsticks, melba toast, and soda crackers (non-salted tops) – all multigrain

Cereals: low-sugar hot or cold – whole and multi-grain. Cereal bars must be multi grain and low in fat.

Rice – Brown is best

Pasta – whole wheat is best

Baked Goods: all low fat, whole wheat/whole grain choices Add wheat bran or oat bran to baked foods

Vegetables and Fruits

Vegetables: fresh and frozen are best-avocados are OK! Tomato & vegetable juice – low salt is suggested

Fruit: unsweetened, fresh, frozen, or canned Unsweetened fruit juice

Low Fat Milk/Dairy Products

All milk/dairy products should have less than 1% fat.

Read the label carefully

Cheese: 10-20% MF cheeses (occasional use only)

Meat and Alternatives

Fish: all fresh, frozen, smoked, or canned in water or vegetable broth

Clams, crabs, lobster, oysters, scallops and shrimp

Poultry: chicken, turkey, or Cornish hens without skin

Meat: lean cuts, fat trimmed

Beef: e.g. round, rump, sirloin, extra lean/lean ground

Veal: e.g. round, rump, tenderloin

Lamb: e.g. leg, loin, shank, ground or lean only

Pork: e.g. tenderloin, back bacon, ham

Cold Cuts: lean ham, pastrami, smoked turkey, turkey breast; “Lite” (low fat) wieners

Wild Game: moose, venison, rabbit

Legumes: chick peas, kidney beans, lentils, lima beans, navy beans, soybeans, split peas, tofu

Eggs: No more than eight eggs per week; two at one time

Beverages

Water: regular, soda, mineral

Sugar-Free soft drinks and other beverages

Coffee, tea, cereal beverages

(Max. 4 cups of coffee or caffeine beverages daily)

Liquor: beer, wine, liquor **(maximum 2 drinks/day for men and 1 drink/day for women)**

(1 drink = 12 oz beer = 4 oz wine = 1 1/2 oz liquor)

FOODS TO CHOOSE LESS OFTEN

Breads: cheese or egg bread, croissants, sweet rolls

Crackers: high-fat – avoid “white” foods

Premixed crumb coating

Cereals: sweetened

Pasta: pasta prepared with butter, cream, or cheese sauces; chow mein noodles

Baked Goods: commercial muffins, cakes, doughnuts, Danish pastries, and high-fat cookies – avoid “white” foods

Vegetables: 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

All milk products which are more than 1% fat (MF)

Cheese: 21% MF (or higher) regular cheese

Fish: canned in oil or commercially fried

Poultry: duck, goose, commercially fried chicken, chicken wings

Meat: fatty marbled meats, ribs, medium/regular ground Organ meats

Side bacon, sausages (unless low fat versions)

Processed canned meats

Cold Cuts: all patés, bologna, salami, high-fat luncheon meats

Regular wieners

Water: regular tonic

Regular: soft drinks, lemonade/iced tea made with sugar Flavoured instant coffee

Liqueurs

Cocktail mixes

Underlined foods are high in salt and should be restricted on a No Added Salt (NAS) diet.

FOODS TO CHOOSE MORE OFTEN (cont'd)

Other Foods

Fats and Oils: (to be used in moderation - 3 teaspoons or less each day)

Margarine: non-hydrogenated soft (regular or light)

Salad Dressings and Mayonnaise: low calorie (calorie-reduced), oil-free, or homemade using recommended oils

Oils: olive, canola, corn, peanut, safflower, sesame, soybean, sunflower

Peanut Butter: natural, non-hydrogenated or light

Nuts: All nuts are good; watch the salt & calories

Seeds: (unsalted) flax, pumpkin, sesame, sunflower

Gravy: defatted

Cocoa powder

FOODS TO CHOOSE LESS OFTEN (cont'd)

Margarine: hydrogenated or hard consistency

Butter, lard, shortening, suet, Crisco

Salad Dressings: made with cheese or sour cream

Oils: coconut, palm, palm kernel

Peanut Butter: containing palm oil or hydrogenated fat

Nuts: all are good; no more than 1/4 cup per day as nuts are very high in calories!

Heavy gravy, cream sauces

Chocolate, carob

Sweets

Sugar: substitutes and artificial sweeteners – Low sugar: jams, jellies, syrups

Sugar free: candies, gelatins, gum

Baked Goods: Low in sugar and high in fibre

Frozen Desserts: low-fat – low sugar ice cream, ice milk, frozen yogurt and sherbet

Sugar: use in moderation

Regular: jams, jellies, syrups (corn or maple)

Regular: candies, gelatins, gum

Baked Goods: regular cakes, pies, cookies – no “white” foods

Frozen Desserts: regular ice cream, ice milk, frozen yogurt, sherbet

Snack Foods

Popcorn: hot air popped or low fat microwave

Pretzels, baked chips

Popcorn: regular & 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

Underlined foods are high in salt and should be restricted on a No Added Salt (NAS) diet.

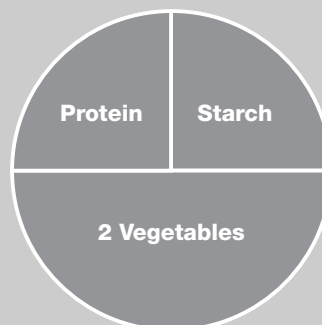
Weight Loss Strategies

If you are overweight:

- Eat smaller portions of foods - your lunch & dinner plate should be 1/4 protein; 1/4 starch (incl. potatoes); 1/2 vegetables
- Eat 3 balanced meals daily (don't skip meals); snack with fruit between meals
- Choose foods lower in FAT and SUGAR; avoid “white foods” (only choose whole or multi-grain products)
- Aim for a maximum weight loss goal of 1-2 lb. (0.5-1 kg) per week
- For best weight loss, avoid the “starch” at supper and no more than 100 calories as an evening snack

Exercise

- Achieve and maintain a healthy body weight by enjoying physical activity and healthy eating
- Aim to be active for at least 30 minutes 3-4 times a week. Start by walking for 10 minutes and increase from there
- Health Canada suggests 2.5 hrs of activity per week. Walking is Great!



Proportions to Live By !

THE DASH DIET – To Lower Your Cholesterol

Following the DASH diet has been shown to lower blood cholesterol and blood pressure with an eating plan low in saturated and total fat, low in cholesterol and emphasizing fruits, vegetables and low-fat dairy. The DASH diet also includes whole-grains, fish, poultry and nuts. It is low in red meats, sweets and sugar-containing beverages. The diet is high in potassium, magnesium, calcium, protein and fibre.

Tips for Following the DASH Eating Plan

The number of servings per day listed are for a 2000 Calorie diet. Remember that if you are trying to lose weight, you should choose lower-calorie foods from each group and replace servings of higher-calorie foods with more fruits and vegetables.

- **Sweets** – 5 servings per week (1 tsp sugar, 1 tbsp jam/jelly, 8 oz. lemonade). Choose low-fat!
- **Nuts, Seeds and Dry Beans** – 4-5 servings per week (e.g. 1/3 cup [85mL] nuts, 2 tbsp [30mL] seeds, 1/2 cup [125mL] cooked beans).
- **Fats and Oils** – 2-3 servings (e.g. 1 tsp [5mL] soft margarine, 1 tbsp [15mL] low-fat mayo, 2 tbsp [30mL] light salad dressing, 1 tsp [5mL] oil).
- **Low-Fat or Fat-Free Dairy** – 2-3 servings (e.g. Skim or 1% Milk, 1 cup [250mL] yogurt, 1.5 oz. Low-salt/fat cheese).
- **Meats, Poultry and Fish** – 2 servings or less (e.g. 3oz. [90 grams] cooked meat/poultry/fish). Remove fat/skin; avoid frying.
- **Grains** – 7-8 servings (e.g. 1 slice bread, 3/4 cup [200mL] cooked pasta/rice/cereal). Choose whole and multi grains!
- **Vegetables** – 4-5 servings (e.g. 1 cup [250mL] raw leafy vegetables, 1/2 cup [125mL] cooked vegetable).
- **Fruits** – 4-5 servings (e.g. 1 medium fruit, 1/4 cup [65mL] dried fruit, 1/2 cup [125mL] fresh/frozen/canned fruit). Use as snacks!

A DASHing Pyramid

Here's how the DASH diet would look like if it took the shape of a pyramid. If you want to follow it, make sure you pay attention to the rather small serving sizes.

A serving of grains for example, is just half a cup of cereal, pasta or rice or a 28-gram slice of bread. That's far less than a typical bagel (110 to 140 grams), a serving of most cereals (one cup), or a restaurant-size serving of spaghetti (about three cups). Servings of seafood, poultry, meat, oils, fruits, and vegetables are also petite.

What's a Serving?

- 1 cup fat-free or low-fat fruit yogurt
- 1/2 cup fat-free or low-fat frozen yogurt
- 1 tbsp maple syrup, sugar or jam

- 1/2 cup cooked beans
- 1/3 cup nuts
- 2 tbsp sunflower seeds

- 1 cup fat-free or low-fat fruit milk or yogurt
- 43 g fat-free or low-fat cheese

- 1 slice bread
- 1/2 cup dry cereal
- 1/2 cup cooked rice, pasta or cereal

- 1 cup lettuce
- 1/2 cup other vegetables

Sweets
(no more than 5/week)

Beans, Nuts, Seeds
(1/day)

Low-Fat Dairy
(2-3/day)

Grains
(preferably whole)
(7-8/day)

Vegetables, Fruits
(8-10/day)

Oils, Salad Dressing, Mayo
(2-3/day)

Seafood, Poultry, Lean Meat
(0-2/day)

- 1 tsp oil or soft margarine
- 1 tsp regular mayonnaise
- 1 tbsp low-fat mayonnaise
- 1 tbsp regular salad dressing
- 2 tbsp light salad dressing

- 85 g broiled or roasted seafood, skinless poultry, or lean meat

- 1 medium fruit
- 1/2 cup fresh, frozen, or canned fruit
- 1/2 cup dried fruit
- 3/4 cup fruit juice

Other Diet Sheets Available:

- Diet for Congestive Heart Failure
- Diet for Hypertension
- Diet for Type 2 Diabetes
- Potassium Replacement Diet
- Weight Management

Please visit www.ottawacvcentre.com for more information.

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