

Cholesterol

How much is too much?

Almost **1** out of every **2** Canadians has **elevated blood cholesterol**

Many don't even know it because they don't feel sick.

If not treated, this condition increases the risks of cardiovascular (heart and blood vessel) disease, which accounts for the death of nearly 4 out of 10 people in Canada.

Fortunately, good lifestyle habits and medication, in certain cases, can help control the level of cholesterol present in the blood.

What is cholesterol?

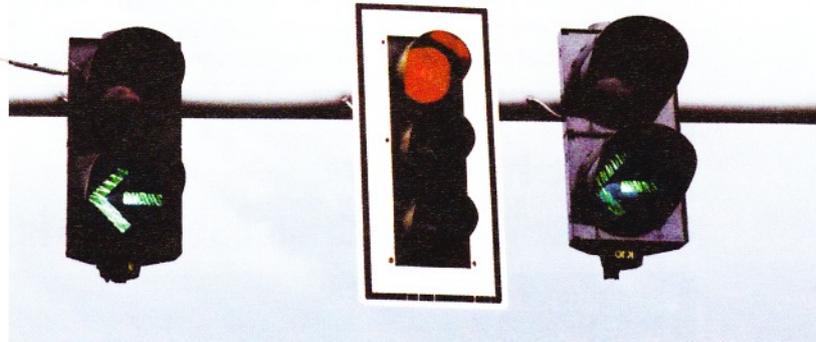
Cholesterol is a fatty substance produced by the body. It is essential to health. Problems occur when there is too much cholesterol in the blood. This is called hypercholesterolemia or dyslipidemia.

Excess cholesterol in the blood tends to accumulate on the lining of the arteries, a condition called atherosclerosis. Such a build-up of cholesterol can gradually block some arteries.

Cholesterol deposits that accumulate in the arteries of the heart can trigger an episode of angina or a heart attack; deposits that accumulate in the arteries of the neck or head can cause a stroke that may lead to paralysis.

What about triglycerides?

Triglycerides are another type of fat required by the body. The risk of cardiovascular disease increases when the triglyceride level is too high, especially when this is combined with a high level of LDL or a low level of HDL.



"Good" and "bad" cholesterol

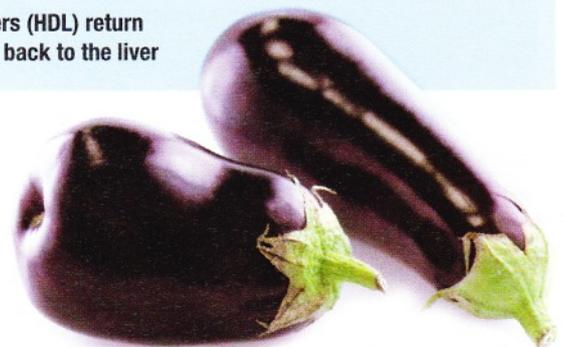
When we refer to good and bad cholesterol, we are not referring to cholesterol found in food but rather to that found in the blood. In fact, we should actually refer to good and bad cholesterol carriers.

Just as water and oil do not mix, neither do blood and cholesterol. To travel through the blood, cholesterol must use carriers. There are two kinds of carriers: good carriers (HDL) and bad carriers (LDL).

Good carriers (HDL) return cholesterol back to the liver

where it is processed into substances useful to the body. HDLs actually clean up the arteries. Bad carriers (LDL) on the other hand have a tendency to promote the deposit of cholesterol along the lining of the arteries.

To increase your protection against cardiovascular disease, it is best to have fewer bad carriers (LDL) and more good carriers (HDL).



This document was made possible through the support of:

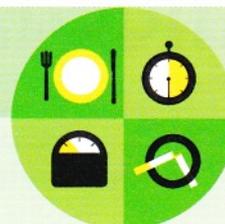
AstraZeneca 

Controlling your cholesterol level

Although cholesterol and triglyceride levels depend for the most part on heredity, it is possible to improve them by adopting the "4 winning strategies".

4 WINNING STRATEGIES

EAT HEALTHY



BE ACTIVE 30 min. ON MOST DAYS

MAINTAIN OR REDUCE YOUR WEIGHT

DO NOT SMOKE

1 Eat healthy

OPT FOR "WINNING CHOICES" FROM THE 4 GROUPS

Vegetables and Fruit

EAT 5 TO 10 SERVINGS A DAY

- EAT a variety of vegetables and fruit and choose deep-coloured ones.
- ENJOY THEM in countless ways, at meal time and snack time!

Grain Products

GO FOR WHOLE GRAIN!

- OPT for bread, rusks and pasta made with whole wheat or grain.
- CHOOSE whole grain cereal with at least 2 grams of fibre per 30 grams serving (check the packaging). Cereals that contain oat bran or psyllium are excellent choices, since they help lower blood cholesterol.

Milk Products

CHOOSE LOWER FAT VERSIONS

- OPT for milk and yogourt with 2 % or less milk fat (M.F).
- TRY enriched soy beverages.
- MANAGE your consumption of cheese by opting for cheese with 20% or less M.F.

Meat and Alternatives

VARY YOUR SOURCES OF PROTEIN!

- THINK fish for 2 or 3 meals a week.
- DISCOVER legumes (e.g., peas, beans, lentils, etc.) and tofu.
- EAT chicken and turkey without the skin.
- CHOOSE lean cuts of meat that have little or no visible fat.
- TAKE small portions of meat or poultry.
- USE low-fat cooking methods.
- CHOOSE lean deli such as turkey breast, ham, roast beef, or vegetarian alternatives.
- LIMIT egg yolks to 2 or 3 per week.

MANAGE YOUR FAT INTAKE

LIMIT

trans fat

saturated fat

dietary cholesterol

- Fried foods (*French fries, chips, doughnuts, breaded foods, etc.*) X
- High-fat baking products (*pastries, cakes, croissants, cookies, etc.*) X
- Hydrogenated margarine, shortening X
- Butter, cream and ice cream X X
- High-fat cheese X X
- High-fat meat X X
- High-fat deli (*sausage, bacon, pâtés, etc.*) X X
- Fancy meats (*liver, kidney, sweetbreads, brain*) X

CHOOSE

unsaturated fat

(mono and polyunsaturated)

- Canola oil, soy oil*
- Olive oil, sunflower oil, corn oil, etc.
- Non-hydrogenated soft margarine
- Nuts and seeds
- Ground flaxseed*
- Avocado and olives
- Fatty fish* (*e.g. salmon, trout, mackerel, sardines, herring*)

*sources of omega-3



2 Be active 30 min. on most days

The benefits of physical activity are many! Being active helps increase the level of good cholesterol (HDL), lower triglycerides and control weight.

To enjoy the benefits of physical activity, keep up the good work all year long: **at least 30 minutes a day, at one time or in blocks of 10 to 15 minutes.** Practise your favourite sport or walk at a brisk pace, take the stairs, play with the kids, dance, take the bike to the corner store, mow the lawn. Go at your own pace. The important thing is to be active as often as possible.

If you are not in the habit, start slowly and gradually increase the number of minutes per day, the number of days per week and the intensity of your activities.



3 Maintain or reduce your weight

Excess weight often goes hand in hand with high levels of cholesterol and triglycerides in the blood. If the excess weight is concentrated **around the waist** rather than on the hips and thighs, there is a **greater risk of cardiovascular disease.**

If you are overweight, losing a few pounds will help control your cholesterol level. There is often an improvement after losing just a few pounds.

To control your weight, don't go for one of those miracle diets! The best way to control weight is to eat a well-balanced diet, limit serving size, eat only when you're hungry, avoid constant snacking between meals and exercise regularly.

4 Do not smoke

Quitting smoking improves the level of good cholesterol (HDL). The relationship between tobacco and cholesterol seems proportional to the number of cigarettes smoked per day. Smoking damages the blood vessels and promotes the accumulation of fat along the artery walls, thereby increasing the risk of cardiovascular disease.

Obviously, it is not easy to quit smoking. There are however many methods and resources to help smokers kick the habit. What's important is to be really determined. Talk to your physician or your pharmacist about it. **You only lose when you stop trying!**

For a smooth transition

To start a new, you might be tempted to change everything at once. In most cases, your chances of success will be greater if you proceed gradually.

- Focus on one change at a time.
- Set realistic goals.
- Congratulate and reward yourself when you reach your goals and don't feel guilty if things don't always work out perfectly.
- Know how to appreciate the benefits of the changes you have made (taking care of yourself, feeling better, etc.).
- Ask your entourage for support.

I'm taking control

Understanding your results

Total cholesterol is measured from a blood sample of a **fasting or non-fasting** person. If the result is above normal, your physician might want to complete your evaluation by doing a lipid profile.

A **lipid profile** is obtained from a blood sample of a **fasting** person. It not only indicates total cholesterol but also the proportion of good and bad cholesterol, as well as the level of triglycerides.

It is generally suggested that men over 40 and women over 50 have a lipid profile. If you are younger, your physician might decide it is best for you to have one.

The desirable levels are:

Total cholesterol:	under 5.2 mmol/L
HDL cholesterol:	1.0 mmol/L or more
LDL cholesterol:	under 3.4 mmol/L
Triglycerides:	under 1.7 mmol/L

According to your age, sex, heredity, lifestyle habits, the presence or not of diabetes, high blood pressure or a high ratio of total cholesterol to HDL cholesterol, your physician might determine other desirable levels in your case.

Should you need medication...

Some people need medication to help control their levels of cholesterol or triglycerides or to lower their blood glucose level or blood pressure. If this is your case, it is important to take the medication as prescribed, even if you feel well. If the medication has undesirable side effects, don't stop taking the medication before talking to your physician or pharmacist about it. And don't forget the "4 winning strategies". They can help limit the amount of medication you may need.

Improving your results

To increase good cholesterol (HDL)

- Lose weight, if necessary
- Be active
- Quit smoking

Certain studies have shown that alcohol, **taken in moderate quantities**, can increase the level of good cholesterol. Be careful, however, for alcohol can increase blood pressure, the level of triglycerides, weight and even lead to alcoholism and its related problems. It can also interfere with certain medication. Talk to your physician about it. And if you don't drink, you don't have to start drinking alcohol to have a healthy heart!

To lower bad cholesterol (LDL)

- Lose weight, if necessary
- Eat well, by managing your fat intake

To lower triglycerides

- Lose weight, if necessary
- Be active
- Eat well, by limiting your intake of sugar-rich sweet foods and beverages and alcohol

WHAT ABOUT NATURAL PRODUCTS?

Always consult your pharmacist or physician before taking natural products. Some products may interact with your medication or have undesirable side effects on your health.

For more information on high cholesterol and its treatment, visit healthycholesterol.ca

This brochure was developed by Doctors Louis Gagnon and Gilles Pineau and by dietitians Sylvie Desroches, Danièle Prévost and Élise Latour of the ACTI-MENU Health Program as well as Raymonde Pineau, M.D., Direction de la santé publique de Québec, in collaboration with: Louise Labrie, Health promotion specialist, Direction de la santé publique de Montréal-Centre; Huguette Bélanger, M.D., Direction de la santé publique de la Montérégie; Roxane Néron, M.D., Direction de la santé publique des Laurentides; François Croteau, M.D., Collège des médecins du Québec; Louise Roy, M.D., Fédération des médecins omnipraticiens du Québec, with the support of a scientific committee composed of: Renaldo Battista, Epidemiologist, McGill University; Monique D. Gélinas, Ph.D., Nutrition, University of Montreal; Jean Davignon, Internist, Clinical Research Institute of Montreal; Mireille Dubost, dietitian, University of Montreal; Gaston Godin, Ph.D., Behavioural Sciences, Laval University; Martin Juneau, Cardiologist, Montreal Heart Institute; Réal Lacombe, M.D., Direction de la santé publique de l'Abitibi-Témiscamingue; and André Lacroix, Endocrinologist, Centre hospitalier de l'Université de Montréal.

We would also like to thank the following experts who were consulted: Beth Abramson, Internist and Cardiologist, St Michael's Hospital, Toronto; Philip Barter, Cardiologist, Heart Research Institute, Sydney, Australia; Greg Bondy and Jiri Frohlich, Medical Biochemists, St Paul's Hospital, Vancouver; W. Virgil Brown, Cardiologist, VAMC, Georgia, United States; Jean-Pierre Després, Ph.D., Exercise Physiology, Institut de cardiologie de Québec; Chantal Blais, Dietitian and Robert Dufour, M.D., Clinical Research Institute of Montreal; George Fodor and Ruth McPherson, Internists, University of Ottawa Heart Institute; Jacques Genest and Allan Sniderman, Cardiologists, Royal Victoria Hospital, Montréal; Roxane Guindon, Dietitian, Heart and Stroke Foundation; Rafik Habib, M.D., Centre cardio-vasculaire de Laval; Pavel Hamet, Endocrinologist, Centre hospitalier de l'Université de Montréal; Marc-André Lavoie, Cardiologist, Montreal Heart Institute; Gilles Paradis, Epidemiologist, Direction de la santé publique de Montréal-Centre; Paul Poirier, Cardiologist, Hôpital Laval, Québec; Barry Rose, M.D., F.R.C.P.(C), F.A.C.C., Health Sciences Complex of St. John's Newfoundland; George Steiner, Endocrinologist, Toronto General Hospital; James Stone, Cardiologist, University of Calgary; Guy Tremblay, Cardiologist, Hôpital du Saint-Sacrement, Québec. Graphic Art: Mr. Edgar Inc.

Professionals and companies can order this brochure by calling (514) 326-2466 or 1 866 356-2466.

© 2004, ACTI-MENU. Reproduction prohibited without prior written consent. Visit our Website at: www.actimenu.ca

Legal deposit – Bibliothèque nationale du Québec, 2004.